

Case Number

W 398

Application  
Transcripts.

Small Exhibits

ETC.

4308

OIL CONSERVATION COMMISSION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

July 10, 1972

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P  
Y

Valley Security Patrol  
P. O. Box 966  
Las Cruces, New Mexico 88001

Attention: Betty S. Evans

Gentlemen:

Enclosed please find copies of portions of the Gas Purchasers Monthly Reports filed by Transwestern Pipeline Company for the months of February, March, April, and May, 1972, which show the amount of gas purchased from the Corinne Grace Humble-Grace Com. Well No. 1 and the Corinne Grace Gradonoco Well No. 1 located, respectively, in Units P and H of Section 2, Township 23 South, Range 26 East, Eddy County, New Mexico.

As the Commission has no authority to decide title to property, the owners of property interests, it is the usual practice for the persons claiming an interest in the proceeds from property to resort to a court of law for a decision. As there was an order of the Commission concerning the above-described Section 2 that may require interpretation by the court, I am also enclosing a copy of Order No. R-4034.

Very truly yours,

GEORGE M. HATCH  
Attorney

GMH/dr  
enclosures

State of New Mexico



Commissioner of Public Lands

PHIL R. LUCERO  
COMMISSIONER

June 9, 1977

P. O. BOX 1148  
SANTA FE, NEW MEXICO 87501

REGISTERED MAIL

Michael P. Grace  
1141 East Bethany-Roma Road  
Phoenix, Arizona 85014

Michael P. Grace  
P. O. Box 1418  
Carlsbad, New Mexico 88220

Re: Gradenoco Com Well No. 1  
SE/4NE/4 Sec. 2-T23S-R26E,  
Lease No. L-1582, NMDC Order  
No. R-4034

*File  
Case 4398*

Dear Sir:

The subject Oil Conservation Commission order Force Pooled the N/2 of Section 2, Township 23 South, Range 26 East for production from the subject well. This well has not produced since September 1973.

In view of no production from the subject well, we no longer consider the Force Pooling order to have any effect on the State lands being located in the NE/4 of said Section 2 and covered by lease L-1582. The above Force Pooling order will in no way be considered to perpetuate these acreage beyond its normal expiration date.

Very truly yours,

PHIL R. LUCERO  
COMMISSIONER OF PUBLIC LANDS

BY:  
RAY D. GRAHAM, Director  
Oil and Gas Division

FRL/RDG/s  
cc:

United States Geological Survey  
P. O. Drawer 1857  
Roswell, New Mexico 88201  
(Federal Lease NM-0331649)

New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

New Mexico Oil and Gas Accounting Commission  
Santa Fe, New Mexico  
Lease file  
Com File



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

October 5, 1970

Mr. Owen Lopez  
Montgomery, Federici, Andrews,  
Hannahs & Morris  
Attorneys at Law  
Post Office Box 2307  
Santa Fe, New Mexico

Re: Case No. 4398  
Order No. R-4034  
Applicant:  
Michael P. & Corinne Grace

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

AJD/ir

Copy of order also sent to:

Hobbs OCC X

Artesia OCC X

Aztec OCC           

Other Mr. James M. Durrett, Mr. Booker Kelly, Mr. Guy Buell





# Telegram

KA021 NSA081

*Rec. Aug 3, 1970 oee*

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1970 AUG 5 AM 8 14

NS MDA006 RS PD=MIDLAND TEX 5 825A CDT=

OIL CONSERVATION COMM OF NEW MEX=

STATE LAND OFC SANTA FE NMEX=

HUMBLE HAS ENTERED INTO FARMOUT AGREEMENT WITH MICHAEL P  
GRACE AND CORINNE GRACE RELATIVE TO HUMBLE LEASES IN  
THE SOUTH HALF OF SECTION 2 TOWNSHIP 23 SOUTH, RANGE 36  
EAST EDDY COUNTY NEW MEXICO UNDER WHICH GRACE EARNS THE  
RIGHT OF ASSIGNMENT IN THE EVENT OF SUCCESSFUL WELL IN  
THE SOUTH HALF OF SECTION 2 -- [WITH RESPECT TO  
APPLICATION FILED BY GRACE FOR COMPULSORY POOLING ORDER  
TO BE HEARD AUGUST 5TH 1970 PLEASE BE ADVISED HUMBLE

*Does not oppose*



**Telegram**

DOES NOT OPPOSE SAID APPLICATION. RESPECTFULLY SUBMITTED=  
HUMBLE OIL AND REFG CO BY L H BYRD MGR  
OF PRODN DEPT MID CONT DIVN=

dearnley-meier reporting service, inc.

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209 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
August 5, 1970

EXAMINER HEARING

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IN THE MATTER OF: )  
)

Application of Michael P. Grace )  
and Corinne Grace for compulsory )  
pooling and unorthodox gas well )  
locations, Eddy County, New )  
Mexico. )  
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Case No. 4398

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 4398

MR. HATCH: Case 4398, Application of Michael P. Grace and Corinne Grace for compulsory pooling an unorthodox gas well location, Eddy County, New Mexico.

MR. LOPEZ: I am Owen Lopez of Montgomery, Federici, Andrews, Hannas and Morris of Santa Fe, and I represent the applicants in this case. Mr. Examiner, at this time I would like to indicate to the Examiner that at my request two persons from the F. A. A., Federal Aviation Authority Office in Albuquerque have agreed to appear and testify but they will appear as impartial witnesses. However, in concurrence with Mr. Durrett who represents Pennzoil, I understand, in this case, I shall call them as my witnesses and we'll both have an opportunity to examine them and also the Examiner if he pleases. They are Mr. E. R. Williams and Mr. Dick Janness, from F. A. A. in Albuquerque. Also I have two other witnesses that I would like to have sworn at this time, if we could swear all four at this time.

MR. UTZ: Be glad to, and any other witnesses to testify would you all stand and be sworn?

(Witnesses were sworn)

MR. DURRETT: If the Examiner please, I would like to enter my appearance at this time -- J. M. Durrett, Jr., of Albuquerque, representing Pennzoil United, Inc.

MR. UTZ: Any others?

MR. KELLY: Mr. Examiner, I am Booker Kelly of Santa Fe, on behalf of Mrs. Grace.

MR. BUELL: For Pan American Petroleum Corporation, Guy Buell.

MR. UTZ: Any other appearances? You may proceed, Mr. Lopez:

WILLIAM J. LE MAY,  
the witness, having been first duly sworn upon his oath,  
according to law testified as follows:

DIRECT EXAMINATION

BY MR. LOPEZ:

Q Would you state your name and place of residence?

A William J. Le May, Consulting Geologist, Santa Fe,  
New Mexico.

Q Mr. Le May have you testified before the Commission  
before and are your qualifications a matter of record?

A Yes, they are.

Q Are you familiar with the application of Michael P.  
and Corinne Grace in this case Number 4398?

A Yes, I am.

Q Are you also familiar and have you studied the  
South Carlsbad Field?

A Yes, I have. I have made a study of the South  
Carlsbad Field at the zones producing in the field.

Q Have you prepared any exhibits in connection with

this application?

A Yes, I have. They are in a packet here. There are six exhibits.

MR. HATCH: These already marked?

A Each exhibit is marked. No, they haven't been stamped yet, no.

(Whereupon the exhibits were marked for identification)

Q Mr. Le May, referring to Exhibit No. 1, would you please point out what it shows?

A Yes, Exhibit No. 1 is a land ownership map in the area with the wells that were drilled to date in the South Carlsbad Pool shown and color coded according to the zone or zones that they are producing from. The one correction in the land ownership in Section 2 being the Sorenson Lease in the South Half of Section 2, is owned by Humble. On the west side of the Highway and on the east approximately thirty acres there in that triangle is owned, I understand, by Gulf, Mobil, Attapaz, Pennzoil United which they had cross conveyances of leases in the area.

The four pay is basically in this, shows three. I prepared Exhibits 2 through 5 which analyze each pay section. The one pay not shown in this map because it is not perforated is the Canyon. This is an indicated pay by a drill stem test of the initial Pennzoil well, Section 12. The completion of these various wells -- I can go through them --

the well in Section 6 of 2327 was drilled by Antwell to the Strawn initially and it was -- they just had a show of gas and temporarily abandoned the well and when Pennzoil completed their discovery well in Section 12, Antwell took the deep well deeper to the Morrow and completed it to what looks like a marginal Morrow well. I understand to date there has been no connection on that well and no production from it, so it is a hard well to gauge the quality of. It does have the perforated internal in the Morrow sandstone.

Going down into Section 12 of 2326, the initial discovery well in the field which is taken to the Devonian and plugged back, completed in the Morrow and Atoka, Morrow being sandstone and Atoka being limestone. This well is a Mobile-Pennzoil 12-1 and it is a very good well. It has produced approximately two million cubic feet of gas per day from each zone since completion. The two wells in Section 1, one of which is the Superior well, located in the Southeast Quarter of Section 1. The Superior Colliat completed as a Strawn well and during April and May has produced approximately two million feet of gas per month.

The other well, the Pennzoil well in the Southwest Quarter of Section 1 is the Pennzoil-Gulf Federal which is completed as a Morrow well. The only other well not completed to date is in the process of being completed and I color coded it according to the anticipated perforations for

the well in Section 6 of 2327 was drilled by Antwell to the Strawn initially and it was -- they just had a show of gas and temporarily abandoned the well and when Pennzoil completed their discovery well in Section 12, Antwell took the deep well deeper to the Morrow and completed it to what looks like a marginal Morrow well. I understand to date there has been no connection on that well and no production from it, so it is a hard well to gauge the quality of. It does have the perforated internal in the Morrow sandstone.

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The other well, the Pennzoil well in the Southwest Quarter of Section 1 is the Pennzoil-Gulf Federal which is completed as a Morrow well. The only other well not completed to date is in the process of being completed and I color coded it according to the anticipated perforations for



producing intervals. It's the well in Section 11. It's a Texas Oil and Gas-Pan American State well. They plan to dually complete this well in Morrow and Atoka. At present, they are working in the Morrow zone and they had a weak drill stem test buty they are hopeful of getting better volume of gas from the Morrow. The Atoka had a good drill stem test and feel it would make a good well. The two red dots shown there are the non-standard locations requested by the Graces.

Q Does this exhibit point out the acreage held on Section 2?

A Yes, it shows the acreage ownership in 2 and the proposed proration units which are the heavy dashed lines in Section 2 and the non-standard locations.

Q If I may interrupt, if we could give extra copies to Mr. Durrett and Mr. Buell to help them follow our presentation. Now, referring to Exhibits 2, 3, 4, and 5, would you please indicate what these exhibits show?

A Exhibits 2 through 5 are analyses of the geology of the area. Each map is a structure map drawn on top of the formation which is considered a pay in the area. These formations being Canyon, Strawn, Atoka and Morrow. The values of net pay values or porosity values given opposite the wells are the net feet of porosity. In most cases these are pay and I will show you, going through the various

formations, the nature of the reservoir involved in the structure in the area.

Exhibit 2 shows contoured on top of the Canyon zone and contour interval is a hundred feet. As you notice, there are currently no wells that are completed from this Canyon zone and only one well indicates production and that is the Pennzoil-Mobile 12-1. As will be shown by other exhibits, there is a strong structure in the area in that Pennzoil-Mobile 12-1 and is an enormously high well. It was a little tight at the top of the Devonian but we discovered sulphur water lower in the Devonian. The only well to date to be productive from the zone is Mobile 12-1 and it is not perforated in the Canyon.

Exhibit 3 analyzes the strong limestone indicating net feet of pay and the wells completed from the Strawn. The only well to date completed from the Strawn, it is the Superior Collat although Mobile's 12-1 is an indicated strong producer testing 5.5 million cubic feet of gas on drill stem test. One factor to bring out here, I understand from the initial bottom hole pressure of approximately five thousand pounds there has been a decline while this well has been on production to approximately three thousand pounds but it seems to have leveled off at three thousand pounds, so there was some worry initially about the quality of the reservoir because regionally this reservoir has been quite erratic responding

differently to treatment and production even though some times good drill stem tests have been encountered. My production information indicates in the month of April and May the well produced approximately two million cubic feet of gas per day. Specifically, 60,825,000 MCF, 60,825 MCF in the month of April and 56,977 in the month of May. All this gas is pretty dry gas from all the formations. The Antwell well as well as the Pennzoil-Gulf Federal and Texas Oil and Gas Company well have poorly developed Strawn sections.

Exhibit No. 4 analyzes the Atoka zone. The Atoka zone is currently producing in the Mobile 12-1 and this zone has produced through the month of May which encompasses eight months, approximately half a billion feet of gas. This is cumulative at the rate of two billion cubic feet of gas per day. It has only seven feet calculated on the logs but it has a poor seven feet. I understand -- I have no data from the zone -- but the Pennzoil-Gulf Federal well which encountered five feet of cordas and drill stem tested water. That would be the one correction as to net pay and porosity. That would not be considered pay in that particular case. I did not have access to that information. That was conversations with Pennzoil personnel. Now, the Texas Oil and Gas Company well had a very good drill stem test of the Atoka zone. They have not yet worked their way up to that zone on a completion attempt, but they are working with the Morrow now, but on drill stem test the Atoka flowed 4.8

million on a one inch choke. I am sorry, for one hour on a half inch choke with 700 pounds pressure. Then they floated it on a one inch choke for 54 minutes for 300 pounds pressure and it gauged 8.6 million, an indicated producing zone with approximately 6,000 pounds of bottom hole pressure.

The last exhibit shows the Morrow sand and is contoured on top of the Morrow formation. Again, on all these exhibits the structure around the Pennzoil 12-1 is quite evident on all horizons and may be partly responsible probably is responsible for the reservoir development through here. Although I don't believe the structural accumulation is such. The Morrow zone is indicated on four wells, however, only two of those wells are indicated to be good producers. They are both of the Pennzoil wells. The Mobile 12-1 and the Gulf Federal and the Antwell drill stem tested only 760 MCFGPD and the Texas Oil and Gas Company 780 and these are relatively weak drill stem tests. Where the two Pennzoil wells are good drill stem tests and they indicated they have good productive potential. So, it looks like only two of the wells are really commercial in this zone with two marginal completions and one well does not even attempt a completion in it.

Summarizing the four exhibits, the geology of the area, we have four indicated pays, each of which are very erratic in their development and very thin pays and although the structure looks like it is a factor in gas entrapment, it's

not a structural accumulation and what might be considered a homogenous reservoir. It looks more like an erratic development whereby the structure controlled the depositional environment which allowed the Canyon zone to build up, for one thing. The Mobile 12 is the only well with a clean Canyon section. It probably helped control the Atoka line deposition. Each of these pays is thin, spotty, and erratic and there is a large bottom hole pressure which accounts for at least good initial production. We don't have a lot of production history on any of the reservoirs. There are some scarey features such as loss of bottom hole pressure on the Superior well and the Strawn.

Q Now, referring to Exhibit No. 6, would you explain what this is and what it shows?

A Exhibit 6 is a well cost estimate of projection of anticipated costs both for a single and a dual completion in the area which tends to agree fairly well with historical data. One of the big items, of course, is the drilling mud needed. We have to drill through the Carlsbad reefs in the area which is cavernous porosity and it is relatively risky operation in the drilling of it and the cost involved. My calculations or my estimates indicate four, the summaries at the bottom of this sheet. I broke these into tangible and intangibles. A single well completion estimated cost would be \$348,350. An estimated dual completion which is

at the very bottom of the page, total cost of \$389,850 and a dry hole cost, \$268,950 for a twelve thousand foot test. This is a hundred percent of the cost estimated and, as you can see, the price of drilling in this area is much higher than most areas even though you are considering twelve thousand foot depth. The mud builds up very considerably and I understand Pennzoil's initial well went to the Devonian, costing in the neighborhood of \$600,000 and their second well \$400,000. I don't have any estimates of the Superior well, but I understand -- this is all second hand. I understand the Texas Oil and Gas Company well will run close to \$400,000 or exceed that, so even with experience in the area, we hope to bring down costs slightly, but it is an expensive area to drill.

Q Does this exhibit include supervision costs?

A No, this is only a -- there is a company supervision while the well is drilling of \$750.00 a month which is a normal charge while the well is drilling. Once the well is on production, it doesn't incorporate that figure.

Q Would you be in a position to recommend the supervision costs for non-consenting members in a unit that might have to be carried?

A My experience with administrative overhead charges would be \$150.00 per month per well. This seems to be an average charge.

MR. LOPEZ: At this time, if the Examiner please, I

would like to introduce into evidence Exhibits 1 through 6.

MR. UTZ: Without objection, Exhibits 1 through 6 will be entered into the record of this case.

Q Now, Mr. Le May, turning to the face that the application concerns two non-standard locations in Section 2, one in the north half which I believe is 2,500 from the north, 330 from the east and the south half 990 from the south and 660 from the east, is there any reason for these locations being non-standard?

A I might mention some of this and I think we might clarify it more with the F. A. A. testimony on the Carlsbad Airport. I showed the nature of the runways on the exhibits to show the relationship of the road and the runways and the airport to Section 2. There is not a standard location in that east half of Section 2. As far as I know, all of Section 2. The west half of Section 2 is very risky. It is shown by the nature of the various pays involved which are spotty, and the expense involved and geologically. I would not recommend drilling in the west half simply because you have high risk with very expensive wells. The only locations in the east half are governed by the topography or by the airport that is there. The fact that we do have the highway cutting through the airport runways which occupy most of Section 2, and you just have to, when you pay like Mr. Grace did, \$226.00 an acre for your acreage, you want to pick the best geological

location possible but also one that's agreeable with the economics and geology. This is why the non-standard locations were applied for. It is not the normal situation where you have an airport occupying your Section and normally in Southeast New Mexico where you have flat land, you can pick a location that takes into account the risk factor and still crowds a good production and reduces as much as possible the risk involved in spending large sums of money but in this particular case, it's a little unusual.

Q Then it would not be your recommendation that this unit be communitized in another method, rather that the east half be communitized into a unit and the west half be communitized into a unit?

A I think the west half would be highly risky geologically. The east half is certainly the safest.

Q Because of the application for these non-standard locations, if this pool were prorated, would you recommend to the Commission a penalty factor because of the fact they are not in what we call orthodox locations?

A Yes, I think if the zones were as prorated gas pools in all zones that you have to grant a penalty factor because of extreme crowding as it is to the adjacent proration unit, crowding the Gulf well and I'd recommend approximately 25% but the field is not prorated because it's a tough problem.

Q Now, you understand that this application also is



not only for the non-standard locations, but also for a forced pooling. Would you recommend a penalty for the members of the unit that elect not to be carried and not be forced pooled?

A Yes, if they elect to be carried in the forced pool, I would certainly recommend the highest that the Commission can go, a 150%. As testified before in many cases, most operating agreements call for 200% non-consent proration because the Commission is limited by law to a 150%. It takes into consideration the high cost of drilling these wells and high cost of drilling the pays and I would recommend the maximum.

MR. LOPEZ: I have no more questions of this witness at this time.

MR. UTZ: Any other questions of this witness:

MR. DURRETT: I have some questions

CROSS EXAMINATION:

BY MR. DURRETT:

Q Mr. Le May, my first question is, I was talking to my client here -- did you say you thought the well should be penalized for the non-standard location, some kind of penalty be put on, I missed it if you did.

A It is kind of an academic question. I said if the gas field is prorated, I would certainly recommend a penalty because of the fact that we are crowding the proration unit to the east.

Q Did you state what kind of penalty that should be?

A I stated 25%

Q How did you calculate that?

A It couldn't be calculated. Many reservoirs lend themselves to an isopach analysis of the net pay. I think you could take any one of my exhibits or possibly any other exhibit and this has been done with the Morrow sandstone especially, and try to draw the limits of productive acreage, in other words, turn it into a productive acreage, hearing their argument, and I think you are second guessing yourself with all the pays in this reservoir because it doesn't lend itself to that kind of analysis, so you just -- it's an arbitrary thing. I think you can erect arguments to justify almost any penalty you wanted to go into from 5% to 10% to 40%. It depends on how you want to draw your lines and with the nature of this thin pay, and just two examples. The Pennzoil well and Superior well that are as close together as two wells can get, and yet they have varying characteristics in all the zones. They are completely different. If you try and project this to other areas where you have this 660 feet between two wells, you can see the highly variable nature of the reservoirs involved.

Q Now, do I understand your testimony to be that you feel that there is some question concerning the productivity of the west half of Section 2?

A I think it is a riskier location, much riskier, especially so when you consider the high cost involved.

Q Well, as a geologist, you are telling me if you can get closer to production, you have a better chance of getting --

A It's obvious. We are talking about quality, too. I think because you try and crowd good wells because you presumably are going to get a better quality well, you may get a stinker or inferior well further away.

Q Now, referring to your structure maps -- I don't have them numbered here, so I'll just have to tell you which one I am talking about -- oh, yes, they are here. Let's go to your Exhibit No. 2 first. That's the structure on top of the Canyon, and, is that correct?

A That's correct.

Q Now, considering structure which is shown by this map, does that show your structure coming up to the west?

A Yes, but you are off the main structure. You go through a saddle in there and start picking up regional dip again when you get in the west half of Section 2.

Q You wouldn't feel that as a geologist if you could get up the structure, you would have a better chance of making a better well?

A Not up regional structure because you have a low between the field structure as defined by existing wells. Three of them pretty well defines structure in there and any-

thing in the neighborhood of Section 2, especially the west half of the northwest half.

Q So considering structure only and whether you were going to locate your well or not, you don't think this exhibit would show - you would be moving up structure and have a better chance of getting a better well if you moved to the west?

A When I talk about structure, I was referring to the structure anomaly that was drilled by the Mobile 12-1. This is a structure in itself that occupies, who knows how large an area, but certainly you are falling off the structure when you go from the Mobile well to the Superior well and from the Mobile well to the Gulf Federal well and therefore, when you get off that structure, you are dealing with a different situation when you start getting back on regional dip. You are talking about the reservoir being affected by a local situation as compared to the reservoir being affected by regional dip which is something entirely different.

Q What we are really saying again, if you would get closer to production, you would have a better chance of getting a good well?

A I think so, yes.

Q So that would be true -- not going into each one of these, would that be true as far as all your structure maps? I believe that all of them show structure going up to the west, isn't that correct?

A Yes, that is up regional dip north to northwest.

Q Talking about standard and non-standard locations, I believe you testified that there were no standard locations available in this south half except the one you have proposed, is that correct? I mean, there are no standard locations available, the one you are proposing is non-standard?

A Right. As I understand the Commission ruling, and I am not as clear on the F. A. A. regulations as the Commission ruling, whether no hearing concerning a gas pool, you are allowed to drill 660 feet from the longest line, the "side" as they call it and 1980 from the short side from proration unit. This is 328 acre spacing which governs the Pennsylvanian formation. That would put you somewhere in the middle of that airport in Section 2 on a standard location with the proration units as they are now.

Q Mr. Le May, if you dedicated the east half of Section 2 to one gas well and the west half of Section 2 to another gas well, you would have standard locations available, is that not correct? Let me be a little more specific. If you dedicated the east half of Section 2 to a gas well to be drilled in the vicinity of the non-standard location, you are proposing in the south half of Section 2, would you not have a standard location available 1980 from the south line and 660 from the east line of that Section?

A Yes.

Q That would be a standard location?

A Looks like it would fall right on the highway, but with some leeway, but could get close to a standard location.

Q And then moving over to the west, if you were dedicating the west half of Section 2 to another gas well to be drilled in that west half, you would have to have at least two standard locations available there, would you not, on the 1986-60?

A Looks like you'd have one from the south. You are crowding that runway in 1980 from the north part of it. Again, there are F. A. A. regulations governing the distance you are from the runway and if you form your proration units different than is shown here, you could arrive at least closer to a standard location. I think I testified previously that if I owned the acreage geologically and paid that kind of price, I would like to have two locations as close as possible to the two wells. A well out of the west half of Section 2 would be almost a wildcat considering the nature of the pays involved.

Q When we were discussing the factor to be applied on forced pooling part of the case --

A Yes.

Q -- I believe you testified to a 150% which would be the maximum penalty the Commission could legally give?

A Right.

Q In your opinion, these wells in the area or wells

that will be drilled in Section 2, would they be wildcat wells or development wells?

A Well, they are considered a development well, but the word "development" has a big question mark as to the quality you are looking for and costs that are involved. It's an economic thing, really.

Q Do you think the Commission should probably give the highest risk factor it possibly can give for wildcat wells and not for development wells?

A I don't think so. I think you could have development wells that are very risky economically and I think the Commission has ruled that way in some cases. In this case, the high cost involved with the thin pay.

MR. DURRETT: That's all I have at this time, Mr.

Examiner.

REDIRECT EXAMINATION:

BY MR. LOPEZ:

Q Mr. Le May, assuming that there was no airport located in Section 2, that is assuming that there were no topographical problems, how would you, if you were a lease holder, what would you recommend to your client how the unit be communitized?

A Well, I would communitize as the proration units shown on Exhibit No. 1 with the north half being one and the south half being one and recommendation location 1980 from

the east lines of those proration units, 660 from the south or possibly 1980 from the south and probably 1980 from the south and east lines and probably 1980 out of the north and east lines.

Q Apparently there is, from what has been said and what will no doubt be said, that there are non-standard locations available having this type of unit formed in the west half and extreme west half of Section 2. Would you recommend to your client that they drill in this area?

A No, I think you are getting away from the influence of the structure and it would be back on regional dip and it comes in a little higher but you are in a different province. Considering the costs in drilling these wells, the risk is pretty high and what you are going to get.

Q It would be your recommendation that they do not take the risk in the extreme west half?

A Yes, I would certainly recommend the east half much to my preference of the east half over the west half.

MR. UTZ: Any other questions, Mr. Durrett?

RE CROSS EXAMINATION:

BY MR. DURRETT:

Q Assuming that you dedicated this acreage, east half, to one well that would be drilled at a standard location, let's assume 1980 from the south and 660 from the east, that would be a standard location and you get a producer there, you



completed a producer, would you recommend to your client that you step over to the west half and drill a well?

A Depending which zone produced, how good it produced and there are a lot of factors really involved there.

Q I am asking you to make an assumption. If you get a pretty good well, would you recommend they step over and drill in the west half?

A I couldn't really answer that truthfully without knowing how much pay they had if additional wells were drilled and it's a big assumption to make if you had a well, if you had a Morrow well. The Morrow reservoir looks like very uniform now. Maybe they made a good Morrow well in there with the Texas Oil and Gas Company. I would feel a lot better about a recommendation for the Morrow. If it was just one pay and \$400,000, you would have to look at it long and hard before you could make an assumption along that line.

Q What I was thinking, to be a little more specific, assuming they get a well that is comparable to the Pennzoil well and in Section 1, would you recommend that they step over on out to the west half of the drill?

A I don't know if I could answer that, really, because you'd have to put the Pennzoil to it, if they lost bottom hole pressure -- I don't have that data -- plotting production versus bottom hole pressure. Certainly, when you came down as far as the Texas Oil and Gas Company well, looks like a poor Morrow

section, and I really couldn't recommend a well that would be anticipating that kind of reservoir, so even though you get a well in the east half of 2, I would be reluctant to assume that would continue on to the west half. You are still in the influence of the structure when you are in the east half of 2. The structure by the Mobile 12-1, I think, has influenced the reservoir and the development of these reservoirs in the area and by getting on regional dip, you are taking a lot bigger gamble, certainly.

Q BY MR. LOPEZ: Mr. Le May, isn't it true that once you are unitized and in this instance you elected to unitize north-south, you are pretty well locked in?

A Once you have formed a proration, you have to work in that unit.

Q BY MR. LOPEZ: You have said it is your position by unitizing north-south that you have a better chance of getting at the gas underneath the ground, right?

A Yes.

Q BY MR. DURRETT: Mr. Le May, if you feel there is a good possibility that the west half of Section 2 is non-productive, that would be half of the Section, what would that do as far as affecting your recommendation of any penalty? Wouldn't that imply the penalty ought to be 50%, at least?

A Not really. If you are talking about gas in place -- recovering your just and equitable share of your reserves, I

think you can get 780 MCF a day to drill stem test and complete it for less than a million and probably not recover your gas in place by that well. I think there could be gas in place, a certain amount of recoverable under the west half, but the permeabilities and porosities are low enough that you wouldn't recover the good gas on the east half, so when you are drawing that zero line, that really doesn't affect your decision to drill. You start arguing where there is gas in place and you try to pick the location that has the best porosity and permeability so you can recover it.

Q Assuming the west half of Section 2 is productive, do you feel these two wells at the locations proposed will drain the west half of Section 2?

A If they encounter good porosity and permeability, yes. I think 30 acres has been drained by gas wells in the past.

MR. DURRETT: That's all I have.

DIRECT EXAMINATION:

BY MR. UTZ:

Q Mr. Le May, what type of reservoir do you consider this?

A Which pay, Mr. Examiner?

Q All of them.

A The Canyon is a limestone, the Atoka, a limestone, the Strawn --

Q As far as recovery process is concerned, is it a structure, stratigraphic trap, water drive, solution drive or what?

A I think the Atoke may be a limited reservoir with some component of water drive if data is correct according to Pennzoil-Gulf Federal. The Atoke reservoir is not well known in this province and the first time we've encountered something like this. I don't have data to analyze the Morrow. I think it would fit the pattern of most Morrow sand-gas reservoirs with erratic development, possibly even lensing of the sand in there. We may not be dealing with the same reservoir throughout even the wells that have been drilled.

Q It is a stratigraphic trap?

A A stratigraphic trap, definitely, yes.

Q How about the Atoka?

A I think the Atoka may have some part structural influence in there, but I think it's still basically a stratigraphic trap because development of the reservoir may be affected by structure not necessarily on just on top of the structure but it looks like Texas Oil and Gas Company well over here way off the structure with a pretty good development that the structure had an influence on developing the reservoir, not really trapping the gas involved. The Strawn, I think, has proven in west Eddy and east Eddy county to be kind of a stratigraphic thing. There have been varying degrees of success

trying to make completions from clean, strong limestone and where it becomes chalky sometimes you have some real completion problems. It is not a uniform completion by any extent. If we are dealing with the Devonian pay, I could testify with more certainty as to what to expect with the uniform reservoir under structural conditions like this. I think all the pays are stratigraphic.

Q Do you consider them all dry gas reservoirs?

A Yes.

Q Mr. Le May, your location for the north half of Section 2 is 330 feet from the east line, is that correct?

A Yes, Sir.

Q How close does that put you to the highway right-of-way?

A A hundred feet, a hundred and forty-six feet.

Q BY MR. LOPEZ: A hundred and twenty-eight?

A A hundred and twenty-eight feet, somewhere in that range.

Q BY MR. UTZ: If you want to cross the highway, would that put you too close to the runway with the F. A. A.? You're dealing with a problem there.

A The runway is going to be closed down for a period of time for improvements to make it suitable for instrument approaches and lengthened and being able to handle big planes, jets mainly, the well could be drilled closer to the runway,

but you are faced with the problem once the runway is reopened. It would certainly be prohibitive, say, to move a pooling unit on a recompletion or do anything to the well. You'd be running into airport restrictions in that regard because the runway will be closed. It allows more latitude where you can drill the well and so forth, but if you are talking of work-over operations or if it takes you longer to drill the well than you anticipated, and they wanted to reopen the runway, then you'd run into problems. I think that location could be moved a little closer to the road, but I still think you have to maintain 50 feet from the center line.

Q BY MR. LOPEZ: About 42 feet?

A Forty-two for right-of-way purposes and it would be my recommendation -- if you are talking about something less than a hundred feet it would make no difference geologically to me on the recommendation.

Q Do you have any idea of the distance from the proposed location of drilling assuming a radius for the platform necessary for the drilling operation?

A You have to build mud pits and all that can be pushed away from the road. The substructure itself and the dog house and all you might be able to construct it such that you are not -- your hole is as close as possible to the road with the supplemental units and all being away from the road.

Q Is a 100 feet out of line, would you say, for a

platform?

A It really depends on the geometry of the units you are putting up there. I think you can occupy a 100 feet with very little effort but when you are talking about a rig that will go to 12,000 feet -- there are tool pushers shacks, place for your pipe, cars, quite a few things that are needed on a drilling location. With the hole itself, a 128 feet, I think, from the right-of-way, you are getting pretty close to the limits you can move that hole and still have a workable operation that's legal.

Q BY MR. UTZ: What would be the problem for directional drilling away from the lease line?

A It might be done. It certainly increases the danger. I have not directly corresponded with people considering directional drilling, but would add \$40,000, \$50,000 and a lot higher risk factor concerning the operation itself. I do not know many contractors that would turn-key a hole directionally drilled. I understand Mrs. Grace does have a turn-key contract on her present locations.

Q BY MR. LOPEZ: Would you take a bottom hole survey of this application if it is granted?

A Being as close to the lease line as it is, I would recommend to the Commission that a bottom hole survey should be made after the well is drilled so we know the bottom of the hole under the proration unit, yes.

MR. UTZ: Any other questions of the witness?

MR. DURRETT: I have one more question.

Q Mr. Le May, if you took a bottom hole survey if this application were approved and found out that well was bottomed on Pennzoil's lease, what would you recommend as a penalty?

A I would recommend the Graces getting in touch with Pennzoil and working out something. That never got to a court or legislative body.

MR. UTZ: Other questions of the witness? The witness may be excused.

MR. LOPEZ: At this time, I would like to call Mrs. Corinne Grace.

DIRECT EXAMINATION:

BY MR. LOPEZ:

Q Would you state your name and place of residence?

A My name is Corinne Grace and I sometimes reside at Santa Fe, Carlsbad and Grants, New Mexico, most of the time.

Q Are you married to Michael Grace --

A Yes, Sir.

Q -- the applicant in this case. Mrs. Grace, you are familiar with the application in Case No. 4398, this case?

A Yes, I am.

Q Now, are you aware that you have applied to the Commission for forced pooling the north half and south half



of Section 2, Township 23 South, Range 26 East, and referring to the north half of that section, have you made any efforts to voluntarily communitize the unit with Pan American, which I believe owns half of the leasehold interest in that unit?

A Yes, Sir.

Q And what were the results of your efforts to arrive at a voluntary communitization and operating agreement?

A We haven't arrived at one yet.

Q You were not successful?

A No.

Q Now, referring to the south half of Section 2, would you sort of outline your negotiations there? I believe Humble owns the lease to the northeast, to the southwest and the northwest to the southeast and that portion lying to the west of the center line of the highway in the northwest, in the northeast, to the southeast?

A Yes, we received a farmout from Humble Oil Company.

Q Referring to that small portion which I believe includes approximately 30 acres lying to the east of the center line in the northeast to the southeast which I understand and I think Mr. Le May testified is a lease of Pennzoil's and Attapax', etc., have you had any success at arriving at a voluntary operating and communitization agreement for that portion?

A We haven't. We have tried very hard but haven't got a farmout or communitization.

Q Now referring to Exhibits 7 and 8, were these exhibits prepared by you or under your supervision?

A Under my supervision.

Q Is it true that these exhibits are notices of proposed instruction or alteration which is required by the Federal Aviation Administration?

A Yes.

Q And did these not indicate, first referring to the north half which I believe is Exhibit 7 at the location 2,500 feet from the north boundary and 330 from the east, this location has been approved subject to the well being drilled while the airport is closed for construction, is that correct?

A That is correct.

Q And referring to Exhibit No. 8 which deals with the well location in the south half of Section 2 this indicates F.A.A. approval with a restriction that the obstruction, that is the rig, be marked and lighted and in accordance with F.A.A. regulations and the fact that a notice form be sent them prior to drilling but your notice and application is, assuming a 146 foot rig which will be used, your application has been approved, is that not correct?

A That's correct.

Q And this is not based on the fact that the runway has to be closed for construction?

A That's correct.

MR. LOPEZ: At this time, if the Examiner please, I would like to introduce Exhibit 7 and 8 into evidence.

MR. UTZ: Without objection Exhibit 7 and 8 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 7 and 8 were offered and admitted in evidence)

MR. LOPEZ: Mrs. Grace, have you been in contact with the airport manager and various officials of the city of Carlsbad?

A Yes, I have.

Q They are apprised of the fact that you are wanting to drill in this section?

A Yes.

Q Have they promised you their complete cooperation?

A That's right.

Q Mrs. Grace, if your application is granted, your applications in both the north half and south half are granted in this case, do you have a time in which you propose to commence drilling?

A Yes, as soon as possible.

Q It is your intention to commence drilling at least at one of the locations before the end of the year?

A Yes, we would like to do both if we could.

MR. LOPEZ: No further questions.

MR. UTZ: Questions?

MR. DURRETT: No questions.

MR. UTZ: Do you have anywhere in your Exhibits the amount of acreage described in these little triangles, etc., their ownership?

MR. LOPEZ: I believe it has been stated by Mr. LeMay into the record. I don't have the exact amount in that little triangle, the northeast to the southeast. Mr. Examiner, I have gone to great lengths to try to determine that exactly. The problem is they are connected with different leases and I've had abstractors, Mr. Currier, I believe down in Artesia, who has been trying to give me that information for quite some time and he has not been able to arrive at the exact figure because of the problem of that

voluntary conveyance of operating rights between the four companies and since it involved various leases he has his own acreage on the lease but leases involve five or six or more separate sections. I shall be happy to try to get the information if I can. I think it's pretty much approximately ten acres of that forty acre unit which are Humble's and the other thirty acres are the other four companies.

MR. UTZ: I presume that your F.A.A. witness can tell me why the drilling has to be done at your north location while the runway is shut down.

MR. LOPEZ: We certainly can.

MR. UTZ: Which is across the highway.

MR. LOPEZ: Yes.

MR. UTZ: The witness may be excused.

MR. LOPEZ: Mr. Examiner, this is sort of unordinary or unorthodox, but I think if we had both explaining, both experts in different phases and since they are going to be describing one problem, if we could have them both testify and answer questions in their own competence I think it would be better.

MR. DURRETT: We will so stipulate. Mr. Lopez can examine two witnesses at the same time if we can cross-examine at the same time.

MR. UTZ: Do you stipulate?

MR. LOPEZ: I certainly do.

E. I. WILLIAMS AND MR. RICHARD JENNESS

called as witnesses, having been first duly sworn, were examined and testified as follows:

DIRECT EXAMINATION

BY MR. LOPEZ

Q Referring to the witness on my left, would you please state your name and residence and occupation?

A E. I. Williams residing in Albuquerque with Albuquerque area office, Program office for Federal Aviation Administration.

Q And the witness on my right I will address the same question.

A My name is Richard Jenness. I live in Albuquerque and am employed by the Federal Aviation Administration as an air space specialist with the Air Traffic Branch.

Q Now Mr. Jenness, referring to applicant's Exhibit which has been marked for identification as Exhibit No. 9 although you did not prepare the exhibit it was, I understand it was, prepared by D. M. Mozen and Associates. Why would they be in a position to prepare such an exhibit?

MR. JENNESS: That, of course, is an airport layout plan for Cavern City airport and it is in conjunction with a proposed alteration and expansion of the airport.

MR. LOPEZ: If I may, Mr. Examiner, I think we would do better if we turned this around. This is Section 2 and this

Section 11 and everybody will understand it better.

MR. LOPEZ: Now, Mr. Jenness, in connection with this exhibit there are some markings indicated. Could you come up here and explain what these markings describe or what they represent.

MR. JENNESS: The shaded areas on this left plan are all located in Section 2 and indicate areas in which a 146 foot structure is to be erected and not considered an obstruction for air navigation. That statement is made with this provision, actually two provisions, one, that any elevation within the shaded areas is not greater than the nearest runway elevation and it is also made with the provision that appropriate notice is given to the F.A.A. and the appropriate determination with no hazard is issued.

Q Just for the record these shaded areas pretty much represent an area at the extreme west of the section, triangle areas, beginning about, I'd say, 660 from the north and going on to an area of about 500 feet from the south - this is very approximate - and about maybe 660 from the west boundary, is that correct?

MR. JENNESS: Just about, yes.

Q And the area on the east commences at an area about halfway down the section, not quite, 330 from the dividing, let's say, the east-west dividing line which would be what, almost 2,500 feet from the north and this is sort of a - what

kind of shape do you call that - but going to a point at the - marking the section - point of Sections 1, 2, 12, and 11 and in a westerly direction for about, I'd say, 660 along the boundary line between Sections 2 and 11 and in a northwesterly direction to a point about 1,980 plus about, let's say, a thousand feet inward from the east boundary at its greatest point and again to the point at the beginning, right?

MR. JENNESS: More or less.

Q The other area is a small triangle almost in the very center point of the airport, triangle which is formed by the three runways, one running in a northeast, southwest direction, the other running in a northwest, southeast direction and the other lying in Section 35 of Township 22 South Range 26 East and which forms the triangle, correct?

MR. JENNESS: Correct.

Q Now, you are familiar with the application of Mr. and Mrs. Grace to drill for gas wells in their Section 2.

MR. JENNESS: I am.

Q And you have approved or you have been involved in approval granted by the F.A.A. to their location staked in the south half of Section 2?

MR. JENNESS: We have issued an acknowledgment which in effect is a determination that a structure within this proposed site would not be a hazard to air navigation.

Q Now concerning the location staked in the north half



which is pretty much in the southeast corner of the north half of Section 2, what has happened regarding that notice of proposed construction or a placement of a rig?

MR. JENNESS: Are you referring to this site right here?

Q Right.

MR. JENNESS: We see no hazard with the provision that the drilling operations are conducted during the time that the northeast, southwest runway is closed for construction purposes.

Q Is there any reason why the northeast, southwest runway should be closed?

MR. JENNESS: If the runway is not closed and the structure of 146 feet above ground level is erected at this location we would consider it an obstruction to air navigation.

Q Now concerning the fact that the runway is being closed, there is a reason for it, I assume, and could you tell us what that reason is?

MR. JENNESS: The reason for closing the runway is to reconstruct the existing portion and extend the runway to the southwest.

Q Is this for the purposes of making an instrument approach runway to handle jet traffic?

MR. JENNESS: That's correct.

Q How long do you believe the runway will be closed or do you have any information as to the length of time the runway will have to be closed for such construction purposes?

MR. JENNESS: I believe it will be closed from about four to six months.

MR. WILLIAMS: It would depend upon the contractor's progress and whether they ran into any difficulties preparing the site and paving. It could vary considerably.

Q Now Mr. Jenness, I believe you heard Mr. LeMay testify as to what we consider standard locations which would be in this case 1,980 from either the east or west and 660 from the south or middle or north boundaries, correct?

MR. JENNESS: Yes.

Q Now are any of these available? Are any standard locations available for drilling which would not conflict with F.A.A. regulations?

A MR. JENNESS: It doesn't appear that there would be. This is 1,980 from the east and 660 from the south?

Q Right, assuming a point 1,980 from the west and 660 from the south and now taking a point 1,980 from the east and 1,980 from the south and 1,980 from the west and 1,980 from the south and moving on up 1,980 from the west and 1,980 from the north, 1,980 from the east and 660 from the north, 1,980 from the west and 660 from the north. Are any of these available for a rig of a 146 feet to drill the depth of 12,000 feet, could it be done?

MR. JENNESS: I think at those locations a drilling rig of a 146 per ground level would be considered an obstruction to air

navagation.

Q I don't know whether you or Mr. Williams, who is best able to testify, whether you would permit a rig to drill within the triangle area formed by the runways. I believe Mr. Williams is best able to testify to this.

MR. WILLIAMS: We would object to that.

Q Any where within the triangle area?

MR. WILLIAMS: That's correct. I might add at this point not only is the airport subject to Federal air regulations but it is also subject to a grant agreement in a prior project and this is what we would like from the airport's branch standpoint as to whether we would be amneable to a drilling rig at any point on the airport.

MR. JENNESS: I think I could clarify this, Mr. Lopez. I am looking at any structure within this area as being a hazard to air navigation while Mr. Williams is looking at it from the point of view that it doesn't apply with grant agreement. I am looking at it from an obstruction standpoint.

MR. WILLIAMS: That's essentially correct with respect to any drilling site on the airport property, within the airport boundaries. It would be necessary for us to determine first of all whether it could in any way effect the operation, development or maintenance of the airport and if it did so effect any of those operations and we would object and ask the sponsor to prohibit it.

Q Mr. Jenness, as you are aware, this well location staked on the north half of Section 2 lies to the east of the highway. Now I believe from your studies of that location whether you would still be permitted to move to the west side of the highway a certain distance, I believe you have it marked at about a thousand feet, as the same distance from the northeast, that is 2,500 feet. Of course since this has to be done while the runway is closed for construction, are there any F.A.A. regulations which require and, especially after this runway is reconstructed, that there be no obstruction within a certain zone of the midpoint of the runway and any regulations from that point on?

MR. JENNESS: Regulations that apply to this runway, after it's extended and an instrument landing system installed, then the imaginary surface that we apply will then double. In other words, on 500 feet on either side of that center line no construction permitted and extending outward from that what we call a primary surface then we permit one foot above ground for every seven foot outward. In other words, this is a seven to one slope beginning 500 feet from the center line of that runway.

Q Now this location which we can refer to as 2,500 from the north and 1,000 from the west, that location has been, let's say tentatively okayed, assuming there is ten foot or less superstructure left after the well was completed, is that correct?

MR. JENNESS: That's correct.

Q Would you prefer the well be located to the east side of the highway considering the fact there might be reworking of the well or anything else after the reconstructed runway is in operation?

MR. JENNESS: Depending on the height of the reworking rig we would, I believe, prefer a structure east of the highway. I don't know exactly the height of this rig that it would follow, if it did follow, but it could not penetrate this seven to one slope 500 feet east of the runway center line.

Q I believe you stated that directly above the highway there is a fifteen foot clearance now available, is this correct? I believe you stated in one of our conversations, or do you recall?

MR. WILLIAMS: That's a design criteria which we apply with respect to aircraft landing or taking off. There's that clearance required over the highway.

MR. LOPEZ: I have no more questions at this time,  
Mr. Examiner.

MR. UTZ: Other questions?

MR. DURRETT: Mr. Examiner, I have some questions,  
please.

CROSS EXAMINATION

BY MR. DURRETT

Q Mr. Jenness, while you are up there, let me question you first. Mr. Jenness, do you have your scale with you?

MR. JENNESS: I do have.

Q. Could you get that or let me hand it to you or something? Mr. Jenness, would you measure for me with the scale you now have in your hand a location 1,980 from the south line and 660 from the east line over on the other side there? Am I correct that you have marked out there or at least measured it off, am I correct that that would fall within your red area?

MR. JENNESS: It appears to.

Q What is your red area?

MR. JENNESS: That red area represents the area in which a 146 foot structure could be erected without being considered an obstruction to air navigation.

Q All right sir, would you move over now to the west side and measure for me a location from 1,980 from the south line and 660 from the west? That also would be within your red area?

MR. JENNESS: That's correct.

Q One more time, would you go to the north and measure a location that is 1,980 from the north line and 660 from the west? (Witness complies) That is not in your red area?

MR. JENNESS: That's outside.

Q About how far back would you go back to the west to get in the red area?

MR. JENNESS: About 800 feet.

MR. DURRETT: That's all I have for Mr. Jenness. I have a couple of questions for Mr. Williams.

MR. DURRETT: Mr. Williams, concerning the closing of this -

MR. WILLIAMS: Northeast, southwest?

MR. DURRETT: Northeast, southwest runway, give us some of the details concerning that. There are some problems concerning that, is that correct?

MR. WILLIAMS: There are some grave problems in the project. The project may or may not be completed depending on what we may be able to arrange in the matter of land acquisition. In the first place if I may indicate on your map here the land that is being acquired for this project is in the blue shaded area. Part of that land is under condemnation, at least one tract of it, and the attorney for the condemnee has objected to the taking, based on a land contract that the owners involved in with the state, therefore, they have raised a question as to whether the city has the ability to condemn. First of all before we can authorize construction or reconstruction on the runway we have to clear that problem up because we require fee simple title and preferably fee simple absolute with no incumbrances whatsoever. That's the first problem and secondly, the incumbrances that exist on the current airport property are of considerable concern to us. Just recently it came to our attention and should have been

laid to rest in a prior project. Generally speaking, our policy is that when we participate in a construction of an airport or development of same, we want the basic airport property within the property lines to be vested in the governmental subdivision owning the airport with fee simple with no incumbrances whatsoever and if there are incumbrances we want them subordinated or extinguished. These problems have to be cleared up to our satisfaction. We have to have title satisfactory to the administrator before we can authorize construction under this project and it is very difficult to tell exactly how long this will take because after the initial hearing on the matter has been held, which we believe will be the first part of this month, the right of appeal for at least thirty days, and if an appeal is taken then no one knows how long it will be.

Q So you don't know how long it will be until the runway will be closed?

MR. WILLIAMS: No way we can specify at this time.

Q Am I correct that the location has been tentatively approved in the north half of Section 2 and cannot be drilled until that runway is closed?

MR. WILLIAMS: Well, it depends a great deal on whether you are referring to the location on or off the airport property. Now as I stated before, if it is on airport property we intend to look at it very carefully to see if it would effect



maintenance of the airport.

Q The one tentatively approved by the road up there in the north half, I don't have the footage on it?

MR. WILLIAMS: This one right here.

Q Right there?

MR. UTZ: Is this the location 2,500 feet from the north and 330 from the east?

MR. WILLIAMS: That tract incidentally denoted on the map is Tract F and it is also city property which they own in fee and considered to be part of the airport property and therefore we would have to study the situation. I think it should be noted here that the air space determination does not constitute approval. As I said before, we would have to examine the situation and determine if there would be interference with airport operation before we could concur insofar as the airport's branch is concerned.

MR. DURRETT: So the answer is, we really don't know, is that correct?

MR. WILLIAMS: No, we do not.

MR. DURRETT: That's all I have.

REDIRECT EXAMINATION

BY MR. LOPEZ

Q Before you step down, Mr. Williams, could you state whether every effort is being made to resolve the problem of condemning that area in the blue?

MR. WILLIAMS: Yes indeed. As a matter of fact I just recently visited with the new attorney appointed by the city of Carlsbad to acquire the land and urged him in all possible haste to acquire the property interest.

Q Is there a need and desire that the runway be converted to instrument approach and jet landing?

MR. WILLIAMS: Yes, our programing of the project is based in large part by A.T.A. recommendation, that is Air Transportation Association recommendations and they anticipate the possible use of DC9's possibly in the near future and the runway length and the strength, strengthening, is part of this project and to reconstruct and strengthening, these factors have to be considered in determining whether or not that type of aircraft can use that runway and, of course, the length probably is about the minimum, I suppose, for the use of that type of aircraft.

Q I don't know whether you or Mr. Jenness is in a better position to answer this question but even though the proposed construction, again referring to the north half of the location, north half of Section 2, was approved only with the provision that it be drilled while the runway was closed for construction, is it not possible that procedure be instituted whereby we might be able to obtain approval of this location even though the obstruction might, let's say, protrude into that area which is verboten, for lack of a better word?

MR. WILLIAMS: Well, I would have to say that based on policy we would have to object to anything that violates any of the surfaces because one of the provisions of the grant agreement to which the airport is subject contains a covenant in which the sponsor will exert every effort not only to protect the approaches but to see that there is no interference with any airport operation.

Q Are you confident that in due time the runway will be reconstructed?

MR. WILLIAMS: Well, we have of course, every hope that it will be. It's a necessary project and if there is any possible way it can be done we want to see it done.

Q I wish to address my question to Mr. Jenness. I believe you stated to me at one time during our conversations concerning this matter that there was an appeal procedure that you could go through with F.A.A. and might it not be true that this location in the north half of the runway which is close to the terminal area and where planes will not be landing could conceivably obtain this exception to the general rule?

MR. JENNESS: As it applies to the - on that chart of course we have two northwest, southeast runways, are you referring to the runway in the north half of that airport?

Q That's right, the north half, southwest runway I am referring to.

MR. JENNESS: To accommodate a drilling rig, Mr. Lopez, for Pennzoil United we by notice to them changed the status of that runway by limiting to aircraft of 1,200 pounds or less and by doing so we changed the approach slope from forty to one to twenty to one. After the drilling rig was removed we canceled that notice to them.

MR. LOPEZ: I don't have any other questions.

MR. DURRETT: I have no other questions, Mr. Examiner.

MR. UTZ: Mr. Jenness, since you marked this off up here would you come up here with me and let's identify these four locations you have marked off. This location I am pointing to is 900 feet from the south and 660 feet to the east line, half of Section 2?

MR. JENNESS: That's true.

MR. UTZ: Now the other two, the other two would you point out the ones you laid out for Standard locations for Mr. Durrett?

MR. JENNESS: 660 from the east, 1,980 from the south.

MR. UTZ: And that was what, Mr. Durrett?

MR. DURRETT: 660 from the east and 1,980 from the south.

MR. UTZ: And the other Standard locations that you had Mr. Jenness mark was -

MR. DURRETT: 660 from the west and 1,980 from the South.

MR. UTZ: That's 1,980 from the south and 660 from the west.

MR. WILLIAMS: I think I might mention on this location here which is very definitely a part of the airport property, we might have some difficulty in arriving at a satisfactory arrangement for a well here simply because we have an access problem and this is an uncontrolled airport and very likely to be a problem with vehicular traffic that can't be controlled on operational areas.

MR. UTZ: Access would be a problem?

MR. WILLIAMS: That's correct, there is a trail road existing here, scheduled to be relocated under this project. It's a dirt road and would be an access but we have a problem of controlling any vehicular traffic. We have no tower at this airport. We do have a flat service station with the people engaged in that work who are not comptrollers and by virtue of their duties as well as their locations they can't see all the operational areas of the airport.

MR. HATCH: Mr. Williams, that is the last location we are talking about, which location, for the record?

MR. WILLIAMS: The triangular area on the west side of Section 2.

MR. LOPEZ: Which is colored in red.

MR. WILLIAMS: That's correct.

MR. UTZ: The location you were speaking of 1,980 from

the south and 660 from the west.

MR. LOPEZ: Any location.

MR. WILLIAMS: Any location in the area since we would have the problem of control of vehicular traffic.

MR. DURRETT: You do plan to build this access road, do you not?

MR. WILLIAMS: Yes, scheduled to be located around the clear zone.

MR. DURRETT: So it could come down to that area?

MR. WILLIAMS: Yes, as far as access is concerned.

MR. LOPEZ: Would this change your concern about allowing it?

MR. WILLIAMS: We would have to have some very definite arrangement with respect to control of vehicular traffic which might proceed on to the runway and get into construction on this runway or operational areas being used by aircraft.

MR. UTZ: Any other questions?

MR. LOPEZ: No further questions of the witness.

MR. UTZ: The witness may be excused.

MR. LOPEZ: Mr. Examiner, the applicant's have nothing further to offer at this time; however, I would like to reserve some time to summarize our position.

MR. UTZ: You have some testimony to put on Mr. Durrett?

MR. DURRETT: I have one short witness. Mr. Hatch, he

was sworn in a minute ago.

~~(Whereupon the witness  
was sworn).~~

DIRECT EXAMINATION

BY MR. DURRETT

Q Will you please state your name and position for the record?

A My name is Joel J. Brown, Production Manager for Pennzoil United Incorporated, Midland.

Q Mr. Brown, will you please refer to your Exhibit No. 1 and explain to the Examiner what that is and what it portrays.

A This is a plat of the area that was generally covered by Mr. LeMay's Exhibit No. 1 and I will not wish to be repetitious but I might point out that it does show the wells completed in the area. However, we have used a little different color coding system than he did. On our particular plat the color red designates Morrow wells, the color blue Atoka and the green Strawn. We perhaps were a little presumptuous in coloring the Texas Oil and Gas well in the south half of Section 11 because even though they have set pipe or in the process of completing the well they have not done so at this time.

Q Now that Exhibit No. 1, does it show the proposed location that the Graces are asking for?

A Yes, I may add that while the use of small circles

inscribed in small triangles colored on there we have designated the proposed locations of the applicant.

Q Now you have some other locations shown on there that we will go into as we proceed but for right now let me ask you, Pennzoil does own the well in Section 1 which is directly to the west of the proposed locations?

A We are the operator of the well in the west half of Section 1. We do not own full interest there.

Q You are appearing here today mainly as an offset operator in objecting to this application, is that correct?

A We are appearing as an offset operator.

Q You do own some interest in Section 2, south half?

A Right.

Q What is that interest approximately?

A Pennzoil owns a net interest of approximately 10.5 acres.

Q Where is that on your plat?

A That is that part of the northwest of the southwest quarter of Section 2 lying east of the highway.

Q Now, will you briefly tell the Examiner what Pennzoil's position is concerning this application?

A It is our opinion that the applicants have a rather, have some serious doubts concerning the productivity of the west half of Section 2, that the sites that have been chosen for these two wells simply reflect a desire on their part to



drill two wells essentially in the same section as near to the existing production as possible.

Q What does your geology show as far as this area is concerned?

A There is only a limited amount of control available to us at this time due to small number of wells that have been drilled but it is the feeling of our geological staff that all of these formations that have indicated production in the area dip to the west, dip to the west or lower to the west.

Q So the limited geology you have shown should be falling off to the west?

A Right.

Q Would that indicate to you the further you crowd to the east the better chance you would have?

A I would be inclined to say yes.

Q What's your opinion about the two proposed locations as to how effectively or efficiently they would drain Section 2?

A I feel that if these locations are approved by the Commission that they will result in extensive cross line drainage of our acreage in the west half of Section 1 and also our acreage in the north half of Section 12 and that the result would be serious violation of the correlative rights and the mineral interest and working interests in those two proration units.

Q Now Mr. Brown, if the east half of Section 2 was

established as a proration unit for one well and the west half of Section 2 was established as another proration unit for another well, would there be standard locations available to the applicants?

A As we understand the topography of the area there would be.

Q Would you point out to the Examiner what those locations would be?

A One standard or orthodox location in the east half of Section 2 could be drilled at a point 660 from the east line and 1,980 from the south line, another location could be drilled at a point 660 from the west line and 1,980 from the south line.

Q Now you don't show that one of your -

A We do not show that location on this particular plat. We have indicated by an "X" a point on the east half where a location could be drilled.

Q But there would be at least one available in the west.

A At least one.

MR. UTZ: What was your location again for the west half?

A 1,980 from the south, 660 from the west from the half.

Q I believe you heard the testimony of the F.A.A. gentlemen that were here that the 1,980 from the west and,

excuse me, 660 from the west and 1,980 from the south would be in their red area, is that correct?

A That's correct.

Q And the other location, the 660 from the east and 1,980 from the south would also be in their red area?

A That's correct.

Q And at least is acceptable to them as any location can be?

A That's my understanding.

Q Now what is your opinion as far as uniform development of this area? Do you feel like the standard locations that you are proposing dedicating the acreage east half and west half would result in better development?

A Yes, I am of the opinion that standard locations would certainly contribute to uniform development of the area.

Q Just so we can get the record straight here, Mr. Brown, did Pennzoil offer a farmout to Mr. and Mrs. Grace?

A Yes, we did.

Q What were the terms of that?

A It was my understanding that they were offered a farmout of our interest in Section 2 based upon an override with an option to convert to a one-quarter working interest after a well drilled at a standard location, after a well had produced two and a half billion cubic feet of gas.

Q And that was with one stipulation and what was the

stipulation?

A That it be at a standard location.

Q That it be at a standard location.

A Right.

Q You heard the testimony by Mr. LeMay concerning his opinion as to a penalty that ought to be placed on these wells for a non-standard location. If the Commission were to approve this application and apply a penalty, how do you think it should be figured?

A I agree that there is no absolute scientific way in which we can at this time determine the basis for penalizing an unorthodox location. Certainly it seems to me that the penalty should be far in excess of twenty-five percent recommended by Mr. LeMay. I would favor using a fraction, the numerator of which would be the distance the well was actually drilled from the line, the denominator of which would be the distance to a standard location. So referring to their proposed location in the north half of the section, that factor would 330 divided by 1,980.

Q What about down in the south half?

A In that event it would be 660 divided by 1,980.

Q Now the well in the north half is getting off line two ways there, isn't it?

A That's correct and, really, I feel that another factor should be applied to take into account that it is not standard

in any direction and so using my formula again we might multiply the first fraction by a second fraction which would be similar to the first in that it would represent the actual distance from the line that the well was drilled divided by the distance that it should have been drilled to be a standard location, if I make myself clear.

MR. UTZ: A hundred and forty over 660 then?

A It would be a very small fraction.

Q MR. DURRETT: All right, Mr. [redacted], turning from the non-standard location portion of this application to the forced pooling aspects of the application, if the forced pooling is granted what would you recommend to the Commission as a risk factor and how do you make your calculation?

A We feel that sufficient development has taken place in the area so that the risk factor has been materially reduced. I feel that a risk factor of a hundred ten percent would be quite reasonable in this case.

Q Would you feel that this area is approaching the state where you are really drilling development wells now?

A Wells drilled in the east half of Section 2 certainly would be in my mind, would be a development well.

Q Do you have anything else?

A I don't think so.

MR. DURRETT: Mr. Examiner, that will conclude my examination.

MR. DURRETT: Mr. Brown, let me ask you, was Exhibit 1 prepared by you or under your supervision?

A Yes.

MR. DURRETT: I move for the introduction of Exhibit No. 1.

MR. UTZ: Without objection Exhibit No. 1 will be entered into the record of this case.

(Whereupon, Applicant's Exhibit No. 1 was offered and admitted in evidence)

MR. PORTER: Mr. Brown, if you recommend for this factor not to exceed a hundred and ten percent -

A Yes sir.

Q - would that apply to any location whether it be standard or the ones requested here?

A No sir, we would not ask for anything in excess of a hundred and ten percent for, if I understand you correctly, your question correctly, for a standard or non-standard in the east half of this section.

MR. UTZ: Other questions?

CROSS EXAMINATION

BY MR. LOPEZ

Q Mr. Brown, isn't it true that the regional dip in this area is to the southeast?

A I am not sure I am qualified to answer that question. On the basis of what I have been told by our geological staff

the dip is actually to the northwest.

Q You admitted that your geological studies are somewhat limited in this area, however, based on the testimony provided in your study and assuming there was no airport sitting on top of Section 2, would it still be your recommendation that if it were your acreage and you had the lease that the units be unitized east-west rather than north-south as we have done?

A I would recommend they be unitized north-south.

Q And you would still recommend to the Commission that a hundred and ten percent penalty would be adequate for a well drilled in the extreme west of the Section 2?

A I believe that I stated I felt a hundred and ten percent would be equitable for a well drilled in the east half. If a well were drilled in the west half it's true that there would be some possible additional risk. In that event would be receptive to something slightly in excess of a hundred and ten percent.

Q In computing your penalty factor, did you take into account the cost of wells in this area?

A No, however we were well aware of the well costs in this area.

Q And this formula you devised, did this take the fact that the airport is sitting on top of Section 2?

A No, because it's possible to drill a standard location

in the east half of Section 2.

Q Does Pennzoil plan to do anymore drilling in this area?

A Yes, we do.

Q In what sections, if you don't mind?

A We are negotiating at the present time for a well to be drilled in the south half of 12. We do not own all that acreage and we have not consummated arrangements to drill at this time but we are working in that direction.

Q If you were put in a position of having to forced pool this area you were just describing, would you recommend that the non-consenting members be carried at a hundred and ten percent?

A Are we talking about the south half of 12?

Q Where you posted.

A I don't think that that would be unreasonable. I am not sure their well will be denied forced pooling in this case and I have given no thought to forced pooling in this south half of 12.

Q You stated that you, in computing your penalty factor, you didn't take into account your cost to you - did you take into account either lost circulation or thin pay?

A No. I admit that there is no real scientific basis for my formula. It is simply what seems to be reasonable in this case.



MR. LOPEZ: No further questions, Mr. Examiner.

CROSS EXAMINATION

BY MR. UTZ

Q Mr. Brown, are you in the process of communitizing the south half of 12?

A Frankly, Mr. Examiner, I am not sure what action is taking place. It's being handled by our Land Department and with the other companies involved and I am not sure what the status of those negotiations are.

Q What is the normal penalty for voluntary communitization?

A It's my understanding that an average number is about a hundred and twenty-five percent.

Q A hundred and twenty-five percent where the working interest is carried?

A Right.

MR. UTZ: Other questions? The witness may be excused.

(Witness excused)

Any other testimony? Does this conclude your case?

MR. DURRETT: That concludes my case.

MR. UTZ: Any other testimony?

MR. Buell I have a short statement when you are ready for statements.

MR. DURRETT: I have a short statement, Mr. Examiner.

MR. LOPEZ: That makes three of us.

MR. UTZ: I am ready for statements.

MR. Buell: If you please, Mr. Examiner, Pan American Petroleum Corporation, as all the exhibits will show, we are the owner of the northwest quarter of Section 2. In that capacity we have no objection to the pooling of the ownership interest in that section into a 320 acre unit. We do feel, as Mr. Brown, that the applicants have set their sights a little high on the risk penalty when you consider the location of the proposed well consisting of the north half of Section 2. I think about the only risk involved is the inherent risk in drilling and not from the standpoint of productivity. So it would be our recommendation to the Commission that the penalty for a risk factor be no greater than ten percent or ten percent, anyway you want to specify it.

We also have no objection to the proposed unorthodox well location for the well to serve that unit. We would recommend to the Commission that they follow their usual custom of setting a penalty that will protect correlative rights of all the interest owners.

MR. DURRETT: Mr. Examiner, I would just like to say very briefly and as the exhibits and testimony speak pretty well for themselves. Just to state our position as summarily as possible, I would like to point out to the Examiner that there is no question about the fact that these two wells, if

this application is approved, are going to drain Pennzoil's acreage. They are going to violate the correlative rights. It is quite evident from all evidence presented here today. There is no question about it. We point out to the Examiner that if they dedicate the east half of Section 2 as one proration unit and the west half of Section 2 as one proration unit, they have two standard locations available that fall within the red area the F.A.A. men were testifying about that would be acceptable or as acceptable as you can get to them. This particular location in the east half of Section 2, 660 from the east and 1,980 from the south would be a direct offset of Pennzoil's well and it would give them and protect their correlative rights and protect our correlative rights. If the application is approved, there is no question that our correlative will be violated, we are going to be drained.

Now speaking about if the Commission should decide to go ahead and approve this application, what kind of a penalty should be given? Mr. Lopez agreed to that, Mr. Buell and Mr. Durrett agreed that there should be a penalty if the application is approved. We think it definitely should not be. If it is approved we submit to the Examiner that the only fair way to put a penalty on that well or those wells is to use a formula suggested by Mr. Brown that would properly penalize for crowding the lease line like that and we submit that if that formula is not used the penalty should be at

least fifty percent because their own witness, Mr. Buell testified he had some doubt in his mind about the productivity of the west half of the section and we submit that there is a very good possibility and the evidence here today showed that the west half of that section may not be productive but at any rate they would have an opportunity if they designated the east half and west half to go over there and drill and find out.

As far as the risk factor on the forced pooling, Mr. Brown has testified that in his opinion it should be approximately a hundred and ten percent or something around there. We submit that a hundred and fifty is completely unreasonable. These are not rank wildcats where the Commission gives them a hundred and fifty and we suggest that it should be substantially less than a hundred and fifty.

We have another problem I would like to point out to the Examiner. This has come up before in these hearings, one where Mr. Buell and I were involved. If you have a non-prorated gas pool and it is highly questionable about penalizing for crowding close to the line, I personally really doubt the legality of it. I don't know how the Commission can really do it and enforce it. At any rate, it's quite a problem and as it is non-prorated pool I am not sure how you could enforce it even if you could legally do that. We do submit the application should be denied. Their correlative rights will not be

involved. They still can go ahead and drill at the standard locations. If it is not denied the penalty Mr. Brown suggested should be placed on the well at the crowded lease line and that the risk factor should not exceed a hundred and ten or thereabouts.

MR. UTZ: Mr. Durrett, do you know whether these wells are producing into the pipeline?

MR. DURRETT: Mr. Brown might.

MR. BROWN: All of the wells with the exception of the Antwell well and the Texas Oil and Gas well are connected and it is my understanding that the connection is being made to the Antwell at the present time.

MR. UTZ: Who is -

A TransWestern.

MR. LOPEZ: Mr. Examiner, at the time the State Land Office put these leases in for bid they were fully aware that an airport sat on top of Section 2 and also the fact that the applicant paid for the lease is a matter of record. It does not seem to be a policy of the Commission to determine how units should be divided, whether north, south, east, west, and the applicants have no alternative but to follow the recommendation of their geologist and engineers and thus elect to communitize the north half and south half, respectively. There seems no reason why the applicant should be forced to unitizing in any other method. The fact that these

locations are unorthodox would not or if the application is granted would not set a precedent. It is not every day where operators wish to drill wells underneath airports. Therefore, if the application and it seems to me based on the testimony that the topography of this area clearly dictates where these wells can be drilled. Mr. LeMay testified that he would recommend or he did recommend that these units be divided north-south and if orthodox locations were available that that is where we would have drilled. However, because of the situation of the runway there is no standard location available to us in the north half or the south half of Section 2. Also, as has been brought out in testimony today, the farther you get away from those, the Superior and Pennzoil wells, the worse the production is or the poorer the wells. If we were forced to drill in the west half and it seems and the recommendation of the geologist that the applicants do not drill in such a location. Therefore, talking about correlative rights, it would seem that the applicants would be denied their correlative rights and gas would be wasted if the application is denied.

Concerning the penalty factor, Mr. Brown admitted that there was no scientific basis for his computations or his arithmetic. You must consider the fact of the spotty payouts, the small pay zones, the lost circulation and the fact that the wells drilled to date have cost at least four hundred

thousand. With this in mind, it would seem that the risk factor is terribly great and that risk factor of fifty percent or a hundred and fifty percent, as you will, certainly would not adequately protect their interests as was also brought out by Mr. LeMay. In usual voluntary communitization operating agreements where non-consenting members elect to be carried the risk factor is usually put at a much higher figure.

Regarding the forced pooling application in the north half of Section 2, Mr. Buell has already consented to force pool and regarding the south half efforts have been made. The Graces were able to obtain farmout from Humble but it was impossible concerning the complicated nature of that small area and therefore it seems necessary that this area also be forced pooled.

With these considerations in mind, the spotty pays and lost circulation zones, we respectfully request and especially because of the location of the airport and the problems inherent with its location and as the F.A.A. officials testified even considering if we did unitize in a different direction access to the west half would still be difficult and we respectfully request the applicants be given their requested locations and their forced pooling applications. Thank you.

MR. UTZ: Does that conclude the statements?

MR. HATCH: I have some letters that should be read into the record that the Commission has received. The first letter is from The Superior Oil Company and it reads:

"Mr. D. S. Nutter

State Land Office Building

July 30, 1970

P. O. Box 2088

Santa Fe, New Mexico 87501

Case No. 4398  
Application for Compulsory  
Pooling and Unorthodox Well  
Locations  
Section 2, T-23-S, R-26-E  
Eddy County, New Mexico

Dear Sir:

Regarding the above captioned application scheduled for August 5, 1970, we, as operator of the Collatt Estate No. 1 Well in Section 1, T-23-S, R-26-E, oppose the unorthodox well locations on the grounds that a standard location exists in the E/2 Section 2 and that orderly development is provided by following the State Rules set out. Protection of royalty owners equities will be more nearly served by following the State Rules. We therefore ask that the Applicant's application be denied.

Yours very truly,

THE SUPERIOR OIL COMPANY

S/ Terry Clay  
Petroleum Engineer"



MR. HATCH: We also have a letter from Mobil Oil Corporation which reads:

"New Mexico Oil Conservation Commission      July 30, 1970  
P. O. Box 2088  
Santa Fe, New Mexico 87501  
Att: Mr. A. L. Porter, Jr.

CASE 4398  
APPLICATION OF MICHAEL P. GRACE  
AND CORINNE GRACE FOR COMPULSORY  
POOLING AND UNORTHODOX WELL LOCATIONS  
EDDY COUNTY, NEW MEXICO

Gentlemen:

Mobil Oil Corporation strongly objects to the Michael P. Grace and Corinne Grace application to drill unorthodox locations 2500' from the north line and 330' from the east line of Section 2, T-23-S, R-26-E, N.M.P.M., Eddy County, New Mexico, and recommends the application be denied. The proposed wells would result in unfair drainage of the offset operator's leases. Furthermore, in Mobil's opinion, the applicant's request for the pooling order to include "all formations down to and including the Morrow Sand of Lower Pennsylvanian formation" is too inclusive. Mobil therefore recommends that consideration for a pooling order be limited to the formations between the top of the Wolfcamp formation down through the Pennsylvanian-Morrow formation.

Very truly yours,

S/ Ira B. Stitt  
Division Operations  
Engineer"

MR. HATCH: We also have a letter from Gulf Oil  
Company which reads:

"Oil Conservation Commission                      August 3, 1970  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501  
Attention: Mr. A. L. Porter, Jr.

Re: Application of Michael P.  
Grace and Corinne Grace  
for Unorthodox Gas Well  
Locations Eddy County,  
New Mexico, Case No. 4398  
Examiner Hearing August 5,  
1970

Gentlemen:

Gulf Oil Corporation is an offset operator to the unorthodox  
gas well locations proposed by the applicants in this case and  
we object to the unorthodox well locations.

The spacing for the South Carlsbad gas fields is under  
Statewide rules which allow 320 acres. Because of the Carlsbad  
Airport the applicants do not have a standard location, but in  
this regard their lease was purchased in the knowledge that  
directional drilling would be required under the existing laws,  
rules and regulations. Although the applicants cannot justify  
a standard location for even the E/2 of Section 2 without  
requiring directional drilling, they are proposing to make all  
of their acreage productive at the expense of the offsetting  
operators.

We can see no justification whatever in the request for the unorthodox locations other than that the applicants intend to obtain an advantage which will cause severe drainage and impairment of correlative rights.

We object to both of these unorthodox locations and urgently request that they be denied.

Yours very truly,

GULF OIL CORPORATION

S/ M. I. Taylor"

MR. HATCH: We also have a telegram to the Oil Conservation Commission of New Mexico which reads:

"KA021 NSA081

NS MDA006 RS Pd=Midland, Tex 5 925A CDT 1970 Aug 5

OIL CONSERVATION COMM OF NEW MEX=

STATE LAND OFC SANTA FE NMEX=

HUMBLE HAS ENTERED INTO FARMOUT AGREEMENT WITH MICHAEL P GRACE AND CORINNE GRACE RELATIVE TO HUMBLE LEASES IN THE SOUTH HALF OF SECTION 2 TOWNSHIP 23 SOUTH, RANGE 36 EAST EDDY COUNTY NEW MEXICO UNDER WHICH GRACE EARNES THE RIGHT OF ASSIGNMENT IN THE EVENT OF SUCCESSFUL WELL IN THE SOUTH HALF OF SECTION 2-- WITH RESPECT TO APPLICATION FILED BY GRACE FOR COMPULSORY POOLING ORDER TO BE HEARD AUGUST 5th 1970 PLEASE BE ADVISED HUMBLE"

MR. UTZ: Other statements? The case will be taken under advisement. The meeting is adjourned.

STATE OF NEW MEXICO     )  
                                   ) ss  
 COUNTY OF BERNALILLO    )

I, Soveida Gonzales, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

*Soveida Gonzales*  
 Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4398 heard by me on Aug. 5 1920.  
*Thos. E. Mc*  
 Examiner  
 New Mexico Oil Conservation Commission

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OIL CONSERVATION COMMISSION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

*file in 4398*

July 26, 1972

Mr. William J. Cooley  
152 Petroleum Center Building  
Farmington, New Mexico 87401

Re: Application of Michael P.  
and Corinne Grace

Dear Mr. Cooley:

By Order No. R-4034, dated October 2, 1970, in Case No. 4398, the Commission approved the application of Michael P. Grace and Corinne Grace to pool certain interests in the N/2 and the S/2 of Section 2, Township 23 South, Range 26 East, Eddy County, New Mexico, and to drill a well on each half section at an unorthodox location. Order No. R-4034 not only approved the application for pooling and unorthodox well locations, but also named the operator of the unit and provided for ratable-take and acreage factors.

The applicants, Michael P. Grace and Corinne Grace, caused the above two wells to be drilled and the wells have been designated as South Carlsbad-Morrow Gas Pool wells.

On July 19, 1972, Michael P. Grace and Corinne Grace through their attorneys, Burr & Cooley, filed an application with the Commission to contract the South Carlsbad-Morrow Gas Pool and to create a new Morrow gas pool and a new Strawn gas pool and for the removal of the restrictions imposed by the above-described Order No. R-4034, alleging that new evidence has been developed which conclusively proves structural and geological separation of the wells completed on the lands to comprise the new pools from all other wells presently completed in the South Carlsbad-Strawn and South Carlsbad-Morrow Gas Pools.

Case No. 4795 concerning the above-described application for contraction of the South Carlsbad-Morrow Gas Pool and the creation of new Strawn and Morrow gas pools will be heard by a quorum of the Commission on August 16, 1972.

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OIL CONSERVATION COMMISSION

P. O. BOX 2088

Mr. William J. Cook  
Page 2

SANTA FE, NEW MEXICO 87501

July 26, 1972

The Commission will not consider the application of Michael P. Grace and Corinne Grace to reopen Case 4398 until after a decision has been made in Case No. 4795.

Yours very truly,

*A. L. Porter, Jr.*  
A. L. PORTER, Jr.  
Secretary-Director

ALP/GMH/dr

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**OIL CONSERVATION COMMISSION**

P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

July 10, 1972

Mr. Howard Everett  
514 North Canyon  
Carlsbad, New Mexico 88220

Dear Mr. Everett:

Enclosed please find copies of portions of the Gas Purchasers Monthly Reports filed by Transwestern Pipeline Company for the months of February, March, April, and May, 1972, which show the amount of gas purchased from the Corinne Grace Humble-Grace Com. Well No. 1 and the Corinne Grace Gradonoco Well No. 1 located, respectively, in Units P and H of Section 2, Township 23 South, Range 26 East, Eddy County, New Mexico.

As the Commission has no authority to decide title to property, the owners of property interests, it is the usual practice for the persons claiming an interest in the proceeds from property to resort to a court of law for a decision. As there was an order of the Commission concerning the above-described Section 2 that may require interpretation by the court, I am also enclosing a copy of Order No. R-4034.

Very truly yours,

GEORGE M. HATCH  
Attorney

GMH/dr  
enclosures

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Case 4328

Hear - 8-5-70

Rec. 9-10-70

Grant Michael P. & Corina Grace  
Compulsory pooling requested  
for the  $\frac{N}{2}$  &  $\frac{S}{2}$  of sec 2-235-  
to E. Use 25% Risk \$100<sup>00</sup> Supervision

Also Grant each N.S.E. as requested  
with the penalty of allowable  
for location as below:

1. Well to be drilled 2500/N, 380/E,  
to be dedicated to the  $\frac{N}{2}$  of sec.
2. shall have an acreage factor

of .41.  
2. Well to be drilled in  $\frac{S}{2}$  of  
sec. 2 shall have an acreage  
factor of .55.

The penalties for locations  
computed on basis of 320  
Ac. drainage at old locations as  
compared to each N.S.E.  
on the alternate:

Dedicate the sec. into 2  
320 ac.  $\frac{E}{2}$  &  $\frac{W}{2}$  and drill  
at old locations which are  
satisfactory with F.A.A., namely  
1950/S & 660/W and 1950/S & 660/E of  
sec. 2.

In the event wells are produced  
the Purchaser shall be required  
to adjust take in accordance  
with penalties imposed.  
Fred W. [Signature]

Name

So. Carolina St.

Address

1. Atoka

Ph.

Remarks:

2. Wagon

3. Mow.

4. Stream

23026

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36

T ..... R ..... State  
or County .....

Docket No. 18-70

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 5, 1970

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 4385: (Continued from the July 15, 1970 Examiner Hearing)

Application of King Resources Company for a unit agreement, Otero County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Brokeoff Mountain Unit Area comprising 37,747 acres, more or less, of Federal, State and Fee lands in Townships 24, 25, and 26 South, Ranges 19 and 20 East, Otero County, New Mexico.

CASE 4388: Application of Humble Oil & Refining Company for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for applicant's Florence B. Lusk, DeSmet Federal, and Hesse Federal leases located in Sections 6 and 7 of Township 15 South, Range 30 East, Double L Queen Pool, Chaves County, New Mexico. Applicant seeks authority to dispose of salt water produced by wells on said leases in unlined surface pits located in the vicinity of said wells.

CASE 4389: Application of Coastal States Gas Producing Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Upper Pennsylvanian formation through the perforated interval from 9789 to 9924 feet in its State "27" Well No. 2 located in Unit F of Section 27, Township 14 South, Range 32 East, Turk-Pennsylvanian Pool, Lea County, New Mexico.

CASE 4390: Application of Murphy H. Baxter for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the North E-K Queen Unit Area comprising 978 acres, more or less, of State lands in Township 17 South, Range 33 East, and Township 18 South, Ranges 33 and 34 East, E-K Yates-Seven Rivers-Queen Pool, Lea County, New Mexico.

Examiner Hearing - August 5, 1970

Docket No. 18-70

-2-

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- CASE 4392: Application of Southwestern Natural Gas, Inc. for the assignment of back allowable, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the assignment of back allowable to its Mershon Gas Comm Well No. 1 located in Unit A of Section 21, Township 22 South, Range 23 East, Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico, for the period from the date of completion of said well on September 22, 1969, to the date of connection of said well on June 4, 1970.
- CASE 4393: Application of Mobil Oil Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from 12,240 feet to 12,463 feet in its Santa Fe Pacific Well No. 3 located in Unit M of Section 26, Township 9 South, Range 36 East, Crossroads-Devonian Pool, Lea County, New Mexico.
- CASE 4394: Application of Phillips Petroleum Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Plata Deep Unit Area comprising 5,600 acres, more or less, of Federal and State lands in Sections 8, 9, 10, 11, 14, 15, 16, 22 and 23 of Township 20 South, Range 32 East, Lea County, New Mexico.
- CASE 4395: Application of Consolidated Oil & Gas, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the perforated interval from 8915 to 8926 feet in its Shipp Well No. 1-17 located in Unit H of Section 17, Township 17 South, Range 37 East, Midway Abo Pool, Lea County, New Mexico.

Examiner Hearing - August 5, 1970  
Docket No. 18-70

-3-

CASE 4396: Application of Klabzuba, Munson and Seaman for a dual completion and salt water disposal, Chaves County, New Mexico. Applicants, in the above-styled cause, seek authority to dually complete its (Varel) Avalanche Journal Well No. 1 located in Unit N of Section 18, Township 10 South, Range 28 East, Chaves County, New Mexico, in such a manner as to produce gas from the San Andres formation in the perforated interval from 2186 to 2204 feet of the Race Track (San Andres) Pool through the casing-tubing annulus and dispose of produced salt water through tubing into the San Andres formation of said pool in the perforated interval from 2262 to 2289 feet.

CASE 4397: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Rio Trust and all other interested persons to appear and show cause why the following Rio Trust wildcat wells located in Section 2, Township 1 North, Range 2 East, Rio Arriba County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program:

Little Chama Valley Co. Well No. 1  
located 660 feet from the North line  
and 1380 feet from the West line;

Sargent Well No. 1 located 925 feet  
from the West line and 1445 feet from  
the South line.

CASE 4267: (Reopened)

In the matter of Case No. 4267 being reopened by the Oil Conservation Commission on its own motion to permit Edward M. Kriss and all other interested parties to appear and show cause why the Edward M. Kriss Little Chama Valley Company Well No. 1, a wildcat well, located 545 feet from the North line and 1530 feet from the West line of Section 2, Township 1 North, Range 2 East, Rio Arriba County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

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Examiner Hearing - August 5, 1970  
Docket No. 18-70

-4-

(Case 4398 continued)

and the S/2 of Section 2, Township 23 South, Range 26 East, Eddy County, New Mexico, to form two 320-acre proration units for the production of gas from any or all zones of the Pennsylvanian formation. Said N/2 and S/2 to be dedicated to wells to be drilled respectively, at unorthodox locations 2500 feet from the North line and 330 feet from the East line of said Section 2 and 990 feet from the South line and 660 feet from the East line of said Section 2.

Also to be considered will be the costs of drilling said wells, a charge for the risk involved, provisions for the allocation of actual operating costs, and the establishment of charges for supervision of said wells.

CASE 4354: (Continued from the July 1, 1970, Examiner Hearing)

Application of Michael P. Grace and Corinne Grace for compulsory pooling, Eddy County, New Mexico. Applicants, in the above-styled cause, seek an order pooling all mineral interests from the surface of the ground down to and including the Morrow formation underlying the N/2 of Section 11, Township 23 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, said acreage to be dedicated to a well to be drilled in either the NE/4 NW/4 or the NW/4 NE/4 of said Section 11. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

Docket No. 18-70

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 5, 1970

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Examiner Hearing - August 5, 1970  
Docket No. 18-70

-2-

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Examiner Hearing - August 5, 1970

Docket No. 18-70

-3-

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Examiner Hearing - August 5, 1970

Docket No. 18-70

-4-

(Case 4398 continued)

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Also to be considered will be the costs of drilling said wells, a charge for the risk involved, provisions for the allocation of actual operating costs, and the establishment of charges for supervision of said wells.

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# Mobil Oil Corporation

MAIL ROOM  
JUL 30 1970  
AUG 3 AM 8 07

P.O. BOX 633  
MIDLAND, TEXAS 79701

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Att: Mr. A. L. Porter, Jr.

*DMJ*  
*file Case 4398*

CASE 4398  
APPLICATION OF MICHAEL P. GRACE  
AND CORINNE GRACE FOR COMPULSORY  
POOLING AND UNORTHODOX WELL LOCATIONS  
EDDY COUNTY, NEW MEXICO

Gentlemen:

Mobil Oil Corporation strongly objects to the Michael P. Grace and Corinne Grace application to drill unorthodox locations 2500' from the north line and 330' from the east line of Section 2 and 990' from the south line and 660' from the east line of Section 2, T-23-S, R-26-E, N.M.P.M., Eddy County, New Mexico, and recommends the application be denied. The proposed wells would result in unfair drainage of the offset operators' leases.

Furthermore, in Mobil's opinion, the applicant's request for the pooling order to include "all formations down to and including the Morrow Sand of Lower Pennsylvanian formation" is too inclusive. Mobil therefore recommends that consideration for a pooling order be limited to the formations between the top of the Wolfcamp formation down through the Pennsylvanian-Morrow formation.

Very truly yours,

*Ira B. Stitt*  
Ira B. Stitt  
Division Operations Engineer

WBSimmonsJr/bje

cc: Michael P. & Corinne Grace  
% Montgomery, Federici, Andrews,  
Hannaba & Morris  
P. O. Box 2307  
Santa Fe, New Mexico

Pennzoil United, Inc.  
P. O. Drawer 1828  
Midland, Texas 79701

**THE SUPERIOR OIL COMPANY**

P. O. BOX 1900  
MIDLAND, TEXAS 79701

July 30, 1970

AM 8 11  
JUL 31 1970

Mr. D. S. Nutter  
State Land Office Building  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Case No. 4398  
Application for Compulsory  
Pooling and Unorthodox Well  
Locations  
Section 2, T-23-S, R-26-E  
Eddy County, New Mexico

Dear Sir:

Regarding the above captioned application scheduled for August 5, 1970, we, as operator of the Collatt Estate No. 1 Well in Section 1, T-23-S, R-26-E, oppose the unorthodox well locations on the grounds that a standard location exists in the E/2 Section 2 and that orderly development is provided by following the State Rules set out. Protection of royalty owners equities will be more nearly served by following the State Rules. We therefore ask that the Applicant's application be denied.

Yours very truly,

THE SUPERIOR OIL COMPANY

*Terry C. Lay*  
Terry C.  
Petroleum Engineer

TDC/js

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4  
AUG 11 1970  
**Gulf Oil Company - U.S.**

EXPLORATION AND PRODUCTION DEPARTMENT  
ROSWELL DISTRICT

Juan Chacin  
DISTRICT MANAGER  
M. I. Taylor  
DISTRICT PRODUCTION  
MANAGER  
P. E. Wyche  
DISTRICT EXPLORATION  
MANAGER  
H. A. Rankin  
DISTRICT SERVICES MANAGER

August 3, 1970

P. O. Drawer 1938  
Roswell, New Mexico 88201

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Re: Application of Michael P. Grace and Corinne Grace  
for Unorthodox Gas Well Locations  
Eddy County, New Mexico, Case No. 4398  
Examiner Hearing August 5, 1970

Gentlemen:

Gulf Oil Corporation is an offset operator to the unorthodox gas well locations proposed by the applicants in this case and we object to the unorthodox well locations.

The spacing for the South Carlsbad gas fields is under Statewide rules which allow 320 acres. Because of the Carlsbad Airport the applicants do not have a standard location, but in this regard their lease was purchased in the knowledge that directional drilling would be required under the existing laws, rules and regulations. Although the applicants cannot justify a standard location for even the E/2 of Section 2 without requiring directional drilling, they are proposing to make all of their acreage productive at the expense of the offsetting operators.

We can see no justification whatever in the request for the unorthodox locations other than that the applicants intend to obtain an advantage which will cause severe drainage and impairment of correlative rights.

We object to both of these unorthodox locations and urgently request that they be denied.

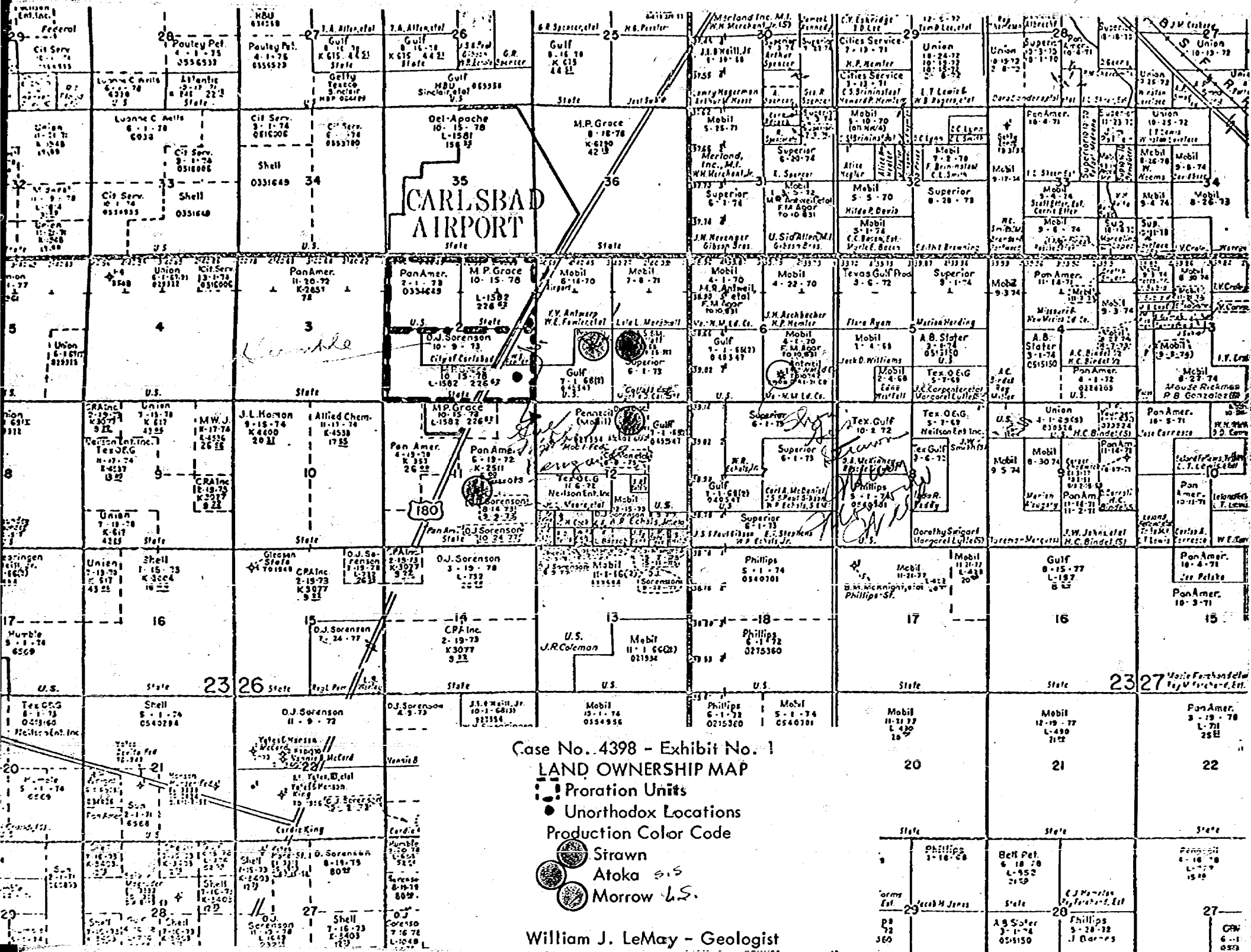
Yours very truly,

GULF OIL CORPORATION

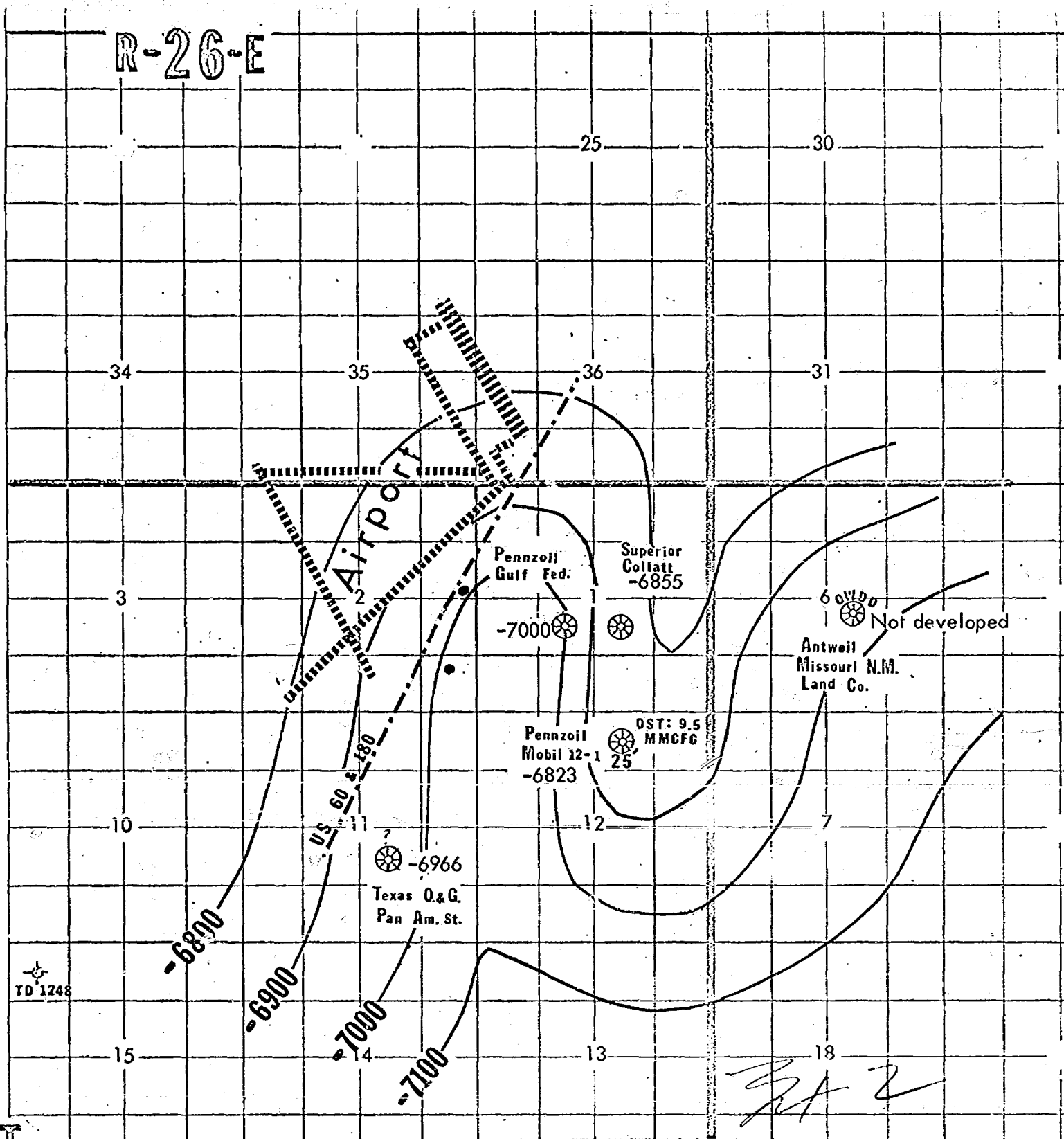
*M. I. Taylor*  
M. I. Taylor



A DIVISION OF GULF OIL CORPORATION



R-26-E



T  
23  
S

Case No. 4398 - Exhibit No. 2  
SOUTH CARLSBAD FIELD  
STRUCTURE - NET PAY MAP  
Datum: Top Canyon  
C.I.: 100 feet  
25' Net Pay  
● Wells Completed In Canyon  
• Proposed Locations

William J. LeMay - Geologist

R-26-E

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SOUTH CARLSBAD FIELD  
STRUCTURE - NET PAY MAP

Datum: Top Strawn Ls.

C.I.: 100 feet

**24' Net Pay**

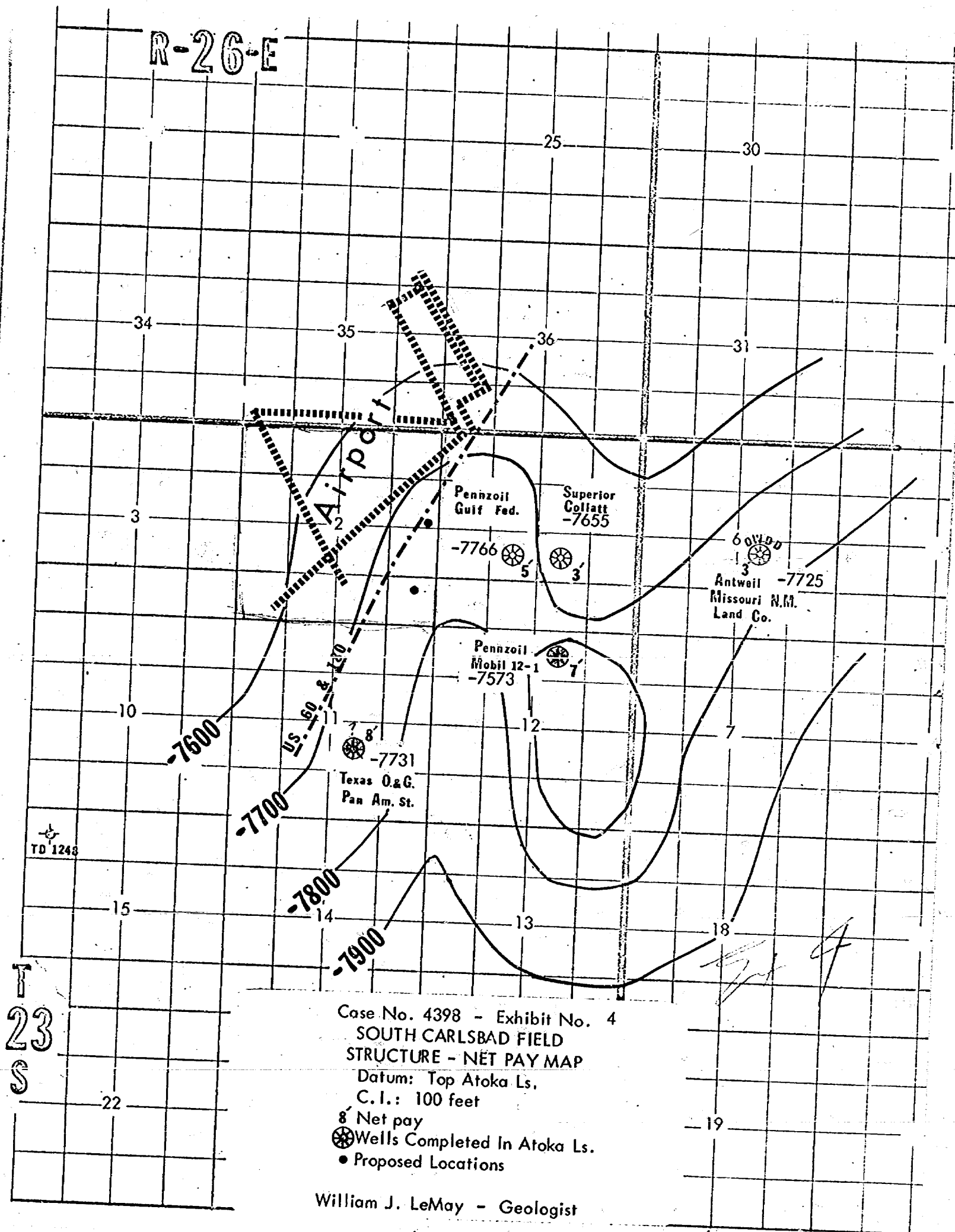
● Wells Completed In Strawn Ls.

● Proposed Locations

William J. LeMay - Geologist



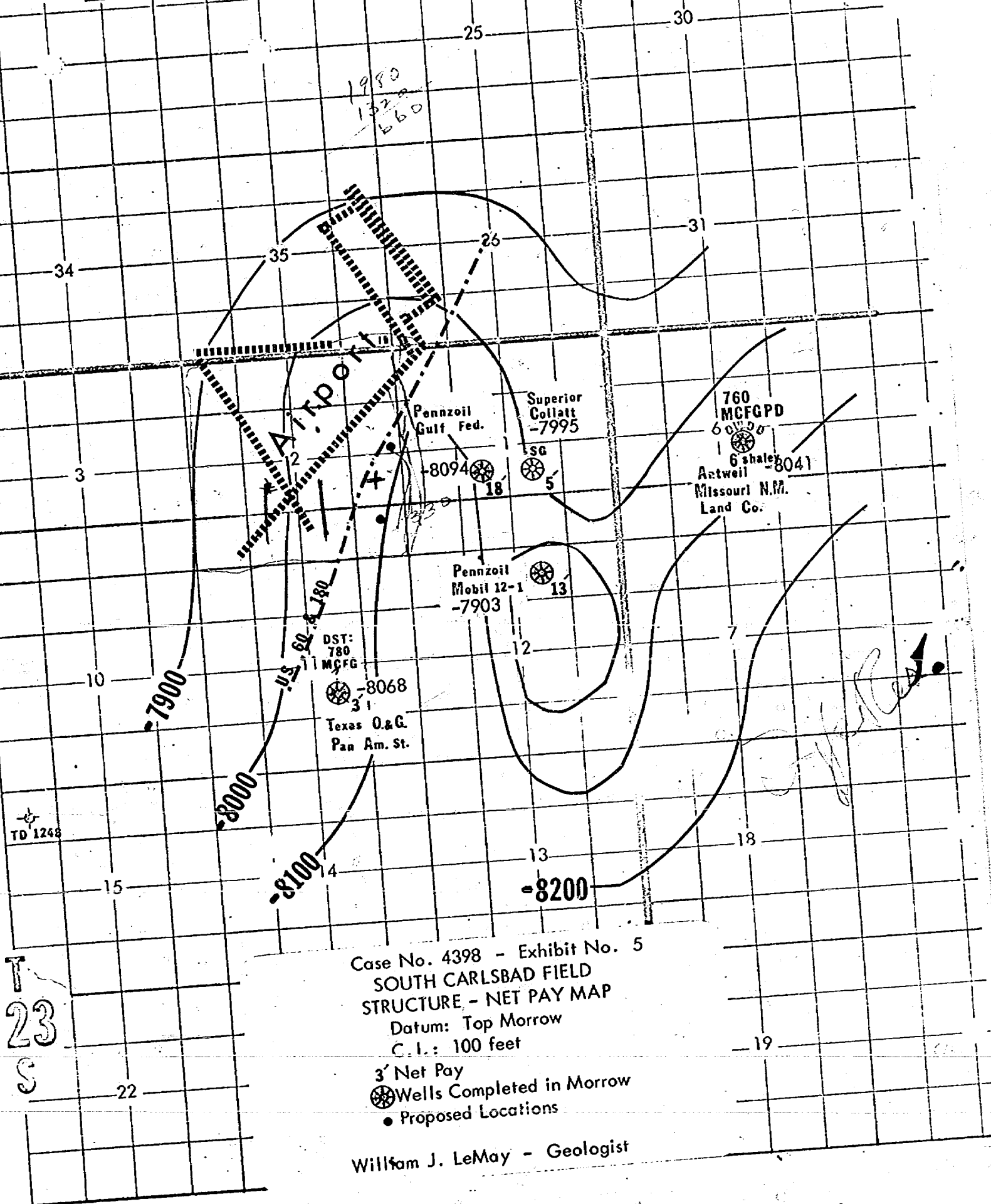
R-26-E



Case No. 4398 - Exhibit No. 4  
 SOUTH CARLSBAD FIELD  
 STRUCTURE - NET PAY MAP  
 Datum: Top Atoka Ls.  
 C.I.: 100 feet  
 8' Net pay  
 Wells Completed In Atoka Ls.  
 Proposed Locations

William J. LeMay - Geologist

R-26-E



## SOUTH CARLSBAD AIRPORT TEST (12,000 feet)

LEASE State	WELL NO. 1	SECTION 2	BLOCK/TOWNSHIP T-23-S	SURVEY/RANGE R-26-E	STATE New Mexico
COUNTY Eddy	FIELD So. Carlsbad	PROR OF COST 100%	Single and Dual Completion		DATE WORK TO BEGIN/EST. DATE OF COMA 1970 1970
REASON WORK NECESSARY OR BENEFITS TO BE DERIVED					

## DRILLING VENTURE TO EVALUATE PRODUCTIVE POSSIBILITIES OF (4) Pennsylvanian gas zones

WORK DETAIL		CASH OUTLAY NECESSARY		IF DRY HOLE DEDUCT AMOUNTS IN THIS COLUMN	ACTUAL COST
INTANGIBLES		Single	Dual(add)		
LOCATION and ROAD					
Survey and Permit		150.			
Road and Location Preparation		500.		250.	
Surface Damages		1,500.			
Fencing - Filling Pits - Cleanup		1,200.			
DRILLING TURNKEY					
_____ ft. at _____ per foot					
90 days Rig time at \$1,600/day		144,000			
_____ days Rig time at _____					
Drill Pipe - Tool Rental					
25 Bits at 200.		5,000.			
_____ Bits at _____					
Reamer Cutters					
Core Barrel - Core Head Rental					

Case No. 4398  
Exhibit No. 6  
WELL COST ESTIMATE

William J. LeMay - Geologist

QUEST FOR ABOVE PROJECT BY: William J. LeMay	PROJECT RECOMMENDED BY: Michael P. Grace	PROJECT APPROVED BY:	PROJECT APPROVED BY:
---	---	----------------------	----------------------

PARTNER

DUAL COMPLETION TOTAL ESTIMATED WELL COST (\$311,850. + 78,000.) = \$389,850.

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION		TO BE COMPLETED BY FAA	
1. NATURE OF STRUCTURE (Complete both A and B below)		AERONAUTICAL STUDY NO. 70-ABQ-174-OE	
A. (Check one) <input checked="" type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> ALTERATION		FAA WILL COMPLETE AND RETURN THIS FORM IF ONE OR MORE OF THE FOLLOWING IS APPLICABLE, OTHERWISE SEPARATE ACKNOWLEDGEMENT WILL BE ISSUED.	
B. (Check one) <input type="checkbox"/> PERMANENT <input checked="" type="checkbox"/> TEMPORARY (State length of time) <u>3</u> Mos.		A. A STUDY OF THIS PROPOSAL HAS DISCLOSED THAT THE PROPOSED STRUCTURE: <input type="checkbox"/> DOES NOT REQUIRE A NOTICE TO FAA. <input checked="" type="checkbox"/> WOULD NOT EXCEED ANY STANDARD OF PART 77 AND WOULD NOT BE A HAZARD TO AIR NAVIGATION. <input checked="" type="checkbox"/> SHOULD DELETED PER FAA "OBSTRUCTION MARKING AND LIGHTING" ADVISORY CIRCULAR 70/7460-1. <input checked="" type="checkbox"/> REQUIRES SUPPLEMENTAL NOTICE. NOTICE FORM (FAA FORM 117-1) ENCLOSED.	
2. NAME AND ADDRESS OF INDIVIDUAL, COMPANY, CORPORATION, ETC. PROPOSING THE CONSTRUCTION OR ALTERATION (Number, Street, City, State and Zip Code)		B. COPY SENT TO FCC? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
To Mr. and Mrs. Michael P. Grace P.O. Box 2062 Santa Fe, New Mexico 87501		REVIEWING OFFICER <u>W. S. [Signature]</u> DATE <u>27 JUL 1970</u>	
3. TYPE AND COMPLETE DESCRIPTION OF STRUCTURE			
Rotary drilling rig This determination is based on the provision that runway 3/21, Cavern City Air Terminal, is closed for construction purposes during the drilling operation.			
4. LOCATION OF STRUCTURE			
A. COORDINATES (To nearest second)		B. NEAREST CITY OR TOWN, AND STATE	
LATITUDE    LONGITUDE		Carlsbad, New Mexico	
32 20 2    104 15 20		(1) DISTANCE FROM 4B    (2) DIRECTION FROM 4B	
		Approximately 3 1/2 MILES    SW	
C. NAME OF NEAREST AIRPORT, HELIPORT, OR SEAPLANE BASE		(1) DISTANCE FROM NEAREST POINT OF AIRPORT	
Carlsbad, New Mexico		1000 feet    S and E	
D. DESCRIPTION OF LOCATION OF SITE WITH RESPECT TO HIGHWAYS, STREETS, AIRPORTS, PROMINENT TERRAIN FEATURES, EXISTING STRUCTURES, ETC. (Attach a highway, street, or any other appropriate map or scaled drawing showing the relationship of construction site to nearest airport(s). If more space is required, continue on a separate sheet of paper and attach to this notice.)			
Township 23 South, Range 26 East, 2500 feet from the North boundary and 330 feet from the East boundary of Section 2.			
5. HEIGHT AND ELEVATION (Complete A, B and C to the nearest foot)		6. WORK SCHEDULE DATES	
A. ELEVATION OF SITE ABOVE MEAN SEA LEVEL		A. WILL START	
3,244		Sept. 1, 1970 ?	
B. HEIGHT OF STRUCTURE INCLUDING APPURTENANCES AND LIGHTING (if any) ABOVE GROUND, OR WATER IF SO SITUATED		B. WILL COMPLETE	
146		Dec. 1, 1970	
C. OVERALL HEIGHT ABOVE MEAN SEA LEVEL (A + B)			
3,390			
7. OBSTRUCTION MARKINGS - The completed structure will be:			
A. MARKED AS SPECIFIED IN THE FAA ADVISORY CIRCULAR 70/7460-1, OBSTRUCTION MARKING AND LIGHTING			YES    NO
			X
B. LIGHTED AS SPECIFIED IN THE FAA ADVISORY CIRCULAR 70/7460-1, OBSTRUCTION MARKING AND LIGHTING			X
I HEREBY CERTIFY that all of the above statements made by me are true, complete, and correct to the best of my knowledge.			
8. NAME AND TITLE OF PERSON FILING THIS NOTICE (Type or Print)		9. SIGNATURE (In ink)	
Owen M. Lopez, attorney for Michael P. and Corinne Grace		<u>Owen M. Lopez</u>	
10. DATE OF SIGNATURE		11. TELEPHONE NO. (Include area code)	
July 14, 1970		505 982-3876	
Persons who knowingly and willfully fail to comply with the provisions of the Federal Aviation Regulations Part 77 are liable to a fine of \$500 for the first offense, with increased Penalties thereafter as provided by Section 902(a) of the Federal Aviation Act of 1958 as amended.			

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		TO BE COMPLETED BY FAA	
NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION		AERONAUTICAL STUDY NO. 70-ABQ-175-OE	
1. NATURE OF STRUCTURE (Complete both A and B below)		FAA WILL COMPLETE AND RETURN THIS FORM IF ONE OR MORE OF THE FOLLOWING IS APPLICABLE, OTHERWISE SEPARATE ACKNOWLEDGEMENT WILL BE ISSUED.	
A. (Check one) <input checked="" type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> ALTERATION		A. A STUDY OF THIS PROPOSAL HAS DISCLOSED THAT THE PROPOSED STRUCTURE:	
B. (Check one) <input type="checkbox"/> PERMANENT <input checked="" type="checkbox"/> TEMPORARY (State length of time) <u>3</u> Mos.		<input type="checkbox"/> DOES NOT REQUIRE A NOTICE TO FAA.	
2. NAME AND ADDRESS OF INDIVIDUAL, COMPANY, CORPORATION, ETC. PROPOSING THE CONSTRUCTION OR ALTERATION (Number, Street, City, State and Zip Code)		<input checked="" type="checkbox"/> WOULD NOT EXCEED ANY STANDARD OF PART 77 AND WOULD NOT BE A HAZARD TO AIR NAVIGATION.	
TO Mr. and Mrs. Michael P. Grace P.O. Box 2062 Santa Fe, New Mexico 87501		<input checked="" type="checkbox"/> SHOULD BE <del>XXXXXXXXXX</del> LIGHTED PER FAA "OBSTRUCTION MARKING AND LIGHTING" ADVISORY CIRCULAR 70/7460-1.	
		<input checked="" type="checkbox"/> REQUIRES SUPPLEMENTAL NOTICE. NOTICE FORM (FAA FORM 117-1) ENCLOSED.	
		B. COPY SENT TO FCC? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		REVIEWING OFFICER <i>Wm S. [Signature]</i>	DATE 21 JUL 1970
3. TYPE AND COMPLETE DESCRIPTION OF STRUCTURE			
Rotary drilling rig			
CC: ABQ-200 SW-FIDO-2 GADO-3 ABQ-600 CNM-FSS Mr. C. McCausland Mr. Owen M. Lopez			
4. LOCATION OF STRUCTURE			
A. COORDINATES (To nearest second)		B. NEAREST CITY OR TOWN, AND STATE	
LATITUDE		LONGITUDE	
32° 19' 44" N 104° 15' 25" W		Carlsbad, New Mexico	
(1) DISTANCE FROM 4B		(2) DIRECTION FROM 4B	
Approximately 3 1/2 MILES		SW	
C. NAME OF NEAREST AIRPORT, HELIPORT, OR SEAPLANE BASE		(1) DISTANCE FROM NEAREST POINT OF AIRPORT	
Carlsbad, New Mexico		1500 feet S and E	
D. DESCRIPTION OF LOCATION OF SITE WITH RESPECT TO HIGHWAYS, STREETS, AIRPORTS, PROMINENT TERRAIN FEATURES, EXISTING STRUCTURES, ETC. (Attach a highway, street, or any other appropriate map or scaled drawing showing the relationship of construction site to nearest airport(s). If more space is required, continue on a separate sheet of paper and attach to this notice.)			
Township 23 South, Range 26 East, 990 feet from the South boundary and 660 feet from the East boundary of Section 2.			
5. HEIGHT AND ELEVATION (Complete A, B and C to the nearest foot)		6. WORK SCHEDULE DATES	
A. ELEVATION OF SITE ABOVE MEAN SEA LEVEL		A. WILL START	
3,250		Sept. 1, 1970 ?	
B. HEIGHT OF STRUCTURE INCLUDING APPURTENANCES AND LIGHTING (if any) ABOVE GROUND, OR WATER IF SO SITUATED		B. WILL COMPLETE	
146		Dec. 1, 1970	
C. OVERALL HEIGHT ABOVE MEAN SEA LEVEL (A + B)			
3,396			
7. OBSTRUCTION MARKINGS - The completed structure will be:			
YES NO			
A. MARKED AS SPECIFIED IN THE FAA ADVISORY CIRCULAR 70/7460-1, OBSTRUCTION MARKING AND LIGHTING			
X			
B. LIGHTED AS SPECIFIED IN THE FAA ADVISORY CIRCULAR 70/7460-1, OBSTRUCTION MARKING AND LIGHTING			
X			
I HEREBY CERTIFY that all of the above statements made by me are true, complete, and correct to the best of my knowledge.			
8. NAME AND TITLE OF PERSON FILING THIS NOTICE (Type or Print)		9. SIGNATURE (In ink)	
Owen M. Lopez, attorney for Michael P. and Corinne Grace		<i>Owen M. Lopez</i>	
		10. DATE OF SIGNATURE	
		July 14, 1970	
		11. TELEPHONE NO. (Precede with area code)	
		505/982-3876	
Persons who knowingly and willfully fail to comply with the provisions of the Federal Aviation Regulations Part 77 are liable to a fine of \$500 for the first offense, with increased Penalties thereafter as provided by Section 902(a) of the Federal Aviation Act of 1956 as amended.			

BEFORE EXAMINER UTZ  
CIE CONSERVATION COMMISSION  
*APP* EXHIBIT NO. 8  
CASE NO. 4398

STATE	COUNTY	FIELD	PROR. OF COST	DATE WORK BEGAN	DATE OF COMPLETION
NEW MEXICO	EDDY CO.	So. Carlisbad	100%	6/24/1971	8/18/71
			Single Completion		

# DRILLING VENTURE TO EVALUATE PRODUCTIVE POSSIBILITIES OF (4) PENNSYLVANIA gas zones

## Work Detail

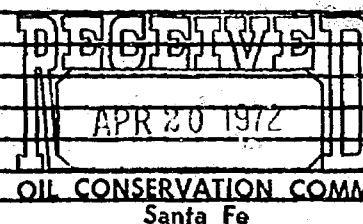
### INTANGIBLES

Location and Road: Title exam. & related work	7,845.46
Survey and Permit	410.48
Road and Location Preparation	1,250.00
Surface Damages	60.00
Fencing-Filling Pits-Cleanup	1,439.88
Drilling Turnkey	161,595.20
ft. at per foot	
w/d.P. 143 1/4 Hrs. Rig time at 71.875	1,102.56
w/d.P. 72 3/4 Hrs. Rig time at 59.375	4,492.31
Drill Pipe - Tool Rental	
Rig time Bits at for testing	
Bits at	
Reamer Cutters	
Core Barrel - Core Head Rental	
Day Work, Testing, Logging, etc	20,280.00

Gradonoco #1

operators: Michael P.  
and Corinne Grace

Casing Cementing	13,258.44
Squeeze Cementing or Plugging	
Logging - Sidewall Coring Log Suite (2)	12,025.51
Core Analysis	
Formation Testings D.S.T.'s (5)	5,720.00
Perforating	2,835.96
Acidizing and FRAC	
Special Rig Completing	
Other Services Welding, etc.	135.72
Trucking	36.40
Geology	6,011.36
Engineering	3,490.56
Labor	348.80
Logging Unit	
Tool and Equipment Rental	4,893.50
Water and Fuel	3,273.73
Casing Supplies	2,611.76
Drilling Mud and Chemicals	27,376.36
Company Supervision (\$800.00 per mo.)	2,400.00
Contingencies 5% (under 3%)	12,000.00
Temperature Surveys	3,385.72



### Single Completion TOTAL INTANGIBLES

#### TANGIBLES

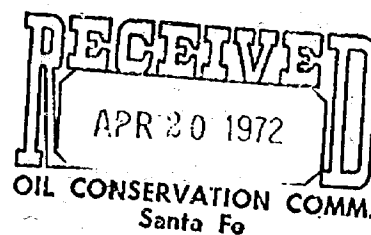
Casing, Conductor	235.26
Casing, Surface 404.10' of 13 3/8"	2,920.84
Casing, Protection 562.60' of 9 5/8"	28,315.03
Casing, Production 511.15' of 4 1/2"	1,279.37
Casing, Other 11,434' of 7"	42,296.47
Tubing, 12,031.80' of 3/8"	12,431.06
Packer	2,765.96

#### Flow Lines

Well Head Equipment	10,325.22
Equipment	10,252.93
Single Completion TOTAL TANGIBLES	110,842.14
Single Completion TOTAL WELL COST	404,702.85

# ACCOUNTING FOR

GRADONOCO # 1  
Section 2, T. 23-S, R. 26-E  
Eddy County, New Mexico



## Title Examination and Related Work

Hinkle, Bondurant, Cox & Eaton	1,845.46	
Federici, Montgomery Et al	<u>1,000.00</u>	
		2,845.46

## Location and Road

Survey and Permit		
John West Engineering	125.00	
Oil and Gas Reports	<u>285.48</u>	
		410.48

## Road and Location Preparation

Mid-Tex Construction Co.	1,250.00	1,250.00
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## Surface Damages

Mrs. James E. Fowler	60.00	60.00
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## Fencing, Filling Pits, Cleanup

A. C. Drilling Spec. (pit liners)	973.44	
Paul Crumpacker	434.20	
Burton Signs	<u>32.24</u>	
		1,439.88

## Drilling - Turnkey

Big West Drilling Company	161,595.20	161,595.20
---------------------------	------------	------------

## Day Work

14-3/4 hours W/DP @ 71.875	1,162.56	
72-3/4 " WO/DP @ 59.375	4,492.31	
Rig Time for Testing W/DP	14,040.00	
Logging - Sidewall Coring Log Suite (2)	<u>6,240.00</u>	
		25,874.87

## Casing and Cementing

Dowell	13,258.44	13,258.44
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## Logging - Sidewall Coring Log Suite (2)

Dresser Atlas	12,025.51	12,025.51
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Formation Testing

Halliburton (5) DST	5,720.00	5,720.00
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Perforating

Dresser Industries, Dresser Atlas	2,835.96	2,835.96
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Other Services - Welding, etc

Jones Welding	135.72	135.72
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Trucking

Hauling Pipe (3rd party chg - Big West Drlg)	36.40	36.40
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Geologists

Charles Miller	935.86	
W. R. Berger	<u>5,075.50</u>	
		6,011.36

Engineers

Conrad Appledorn	322.12	
L. R. Pomeroy	<u>3,168.44</u>	
		3,490.56

Labor

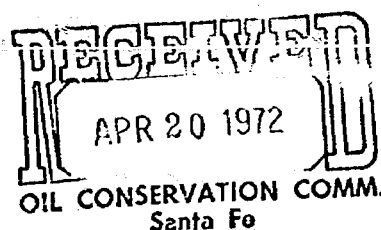
Johnny Gray	78.00	
John Wilsher	250.00	
John Wilsher, Jr	<u>20.80</u>	
		348.80

Temperature Surveys

Sonic Bond - Dresser Atlas	2,861.18	
Bennett Wire Line	203.81	
Halliburton	<u>320.73</u>	
		3,385.72

Tool and Equipment Rentals

M & B Fishing	151.17	
A B C Rentals	811.20	
Land & Marine	1,592.50	
Stevenson & Roach	<u>2,338.63</u>	
		4,893.50



Water and Fuel

City of Carlsbad	637.83	
Hauling Bring Water (3rd party chg - Big West Drilling)	<u>2,635.90</u>	3,273.73

Casing Supplies

Loomis	581.00	
Bobs Casing Crew	297.26	
Reds Casing Crew	210.00	
Gator Hawk	<u>2,104.50</u>	3,192.76

Drilling Mud and Chemicals

Delaware Mud	23,885.10	
Nitrogen Oil Well Service	3,363.34	
Salt Supply	<u>127.92</u>	27,376.36

<u>Company Supervision (\$800/mo)</u>	2,400.00	2,400.00
---------------------------------------	----------	----------

Contingencies 5%

Blow-out Insurance under 3% - Lloyd's of London	12,000.00	12,000.00
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Casing Conductor Pipe

Casing conductor pipe - 3rd pty. chg - Big West Drilling	193.44	
Cementing conductor pipe - 3rd pty chg - Big West Drilling	<u>61.82</u>	255.26

Casing

Bearing Supply		
13-3/8" surface pipe 404.10'	2,920.84	
McDaniel Co.		
9-5/8" casing - 5642.60'	28,315.03	
Apex 7" casing	12,461.81	
McDaniel Co. 7" casing	29,834.66	
(total of 11,434' of 7")		
McDaniel Co. 511.15' of 4-1/2"	1,279.37	
McDaniel Co. 6,031.80' of 2-3/8"		
tubing	6,280.77	
Fort Worth Pipe & Supply 6,000'		
2-3/8" tubing	<u>6,150.29</u>	87,242.77

RECEIVED  
APR 20 1972  
OIL CONSERVATION COMM.  
Santa Fe

Packers

Guiberson  
M-W L

1,037.90  
1,728.06

2,765.96

Well Head Equipment

Rector  
O. C. T.

6,004.47  
4,320.75

10,325.22

Surface Equipment

Sivalls and Roustabout Crew  
to install, and trucking  
Stevenson Roach Tank  
crew, etc

9,152.93  
1,100.00

10,252.93

TOTAL:

404,702.34

RECEIVED  
APR 20 1972  
OIL CONSERVATION COMM.  
Santa Fo

## SOUTH CARLSBAD AIRPORT TEST (12,000 feet)

Estimate of well costs as required by the  
N.M.O.C.C. in Order No. R-4034

LEASE	State	WELL NO.	SECTION	BLOCK/TOWNSHIP	SURVEY/RANGE	STATE
		2	2	T-23-S	R-26-E	New Mexico
COUNTY	FIELD	PROR OF COST	Single and Dual Completion		DATE WORK TO BEGIN	EST. DATE OF COMP.
Eddy	So. Carlsbad	100%			Nov. 25, 1970	Feb. 28, 1971

REASON WORK NECESSARY, OR BENEFITS TO BE DERIVED

## DRILLING VENTURE TO EVALUATE PRODUCTIVE POSSIBILITIES OF (4) Pennsylvanian gas zones,

WORK DETAIL		CASH OUTLAY NECESSARY		IF DRY HOLE DEDUCT AMOUNTS IN THIS COLUMN	ACTUAL COST
INTANGIBLES		Single	Dual (add)		
LOCATION and ROAD					
Survey and Permit		150.			
Road and Location Preparation		500.		250.	
Surface Damages		1,500.			
Fencing - Filling Pits - Cleanup		1,200.			
DRILLING TURNKEY					
_____ ft. at _____ per foot					
90 days Rig time at \$1,600/day		144,000			
_____ days Rig time at _____					
Drill Pipe - Tool Rental					
25 Bits at 200.		5,000.			
_____ Bits at _____					
Reamer Cutters					
Core Barrel - Core Head Rental					
CASING CEMENTING		10,000.	5,000.	3,500.	
SQUEEZE CEMENTING OR PLUGGING		1,500.	500.		
LOGGING - SIDEWALL CORING		7,500.			
CORE ANALYSIS					
FORMATION TESTING D.S.I.'s		8,000.			
PERFORATING O tie-in log		2,000.	1,000.	1,500.	
ACIDIZING and FRAC		16,000.	14,000.	16,000.	
SPECIAL RIG COMPLETING		6,000.	4,000.	6,000.	
OTHER SERVICES Welding, etc.		1,500.	500.	700.	
TRUCKING		1,200.		300.	
GEOLOGY		1,500.			
Engineering		1,500.	300.	750.	
Labor		700.	300.	400.	
Logging Unit		4,000.			
TOOL and EQUIPMENT RENTAL					
WATER and FUEL		2,000.			
CASING SUPPLIES		2,200.	3,000.	800.	
DRILLING MUD and CHEMICALS		55,000.			
COMPANY SUPERVISION (\$750. per mo.)		2,250.	200.	500.	
CONTINGENCIES 5%		13,700.	1,400.		
For Dual Completion - add \$30,200.					
Single Completion TOTAL INTANGIBLES		286,900		30,700.	
Dual Completion TOTAL INTANGIBLES		317,100			
TANGIBLES					
CASING, CONDUCTOR					
CASING, SURFACE 350' of 13 3/8"		2,000.			
CASING, PROTECTION 7100' of 9 5/8"		22,700.		11,000.	
CASING, PRODUCTION 12,000 of 5 1/2"		29,000.		29,000.	
CASING, OTHER					
TUBING 12,000 of 2 1/16"		9,000.	9,000.	9,000.	
PACKER		700.	700.	700.	
Flow Lines		500.	100.	500.	
For Dual Completion - add \$12,600.					
WELL HEAD EQUIPMENT		5,000.	2,000.	2,000.	
SUBSURFACE EQUIPMENT		2,200.	800.	1,200.	
Single Completion TOTAL TANGIBLES		71,000.		53,400.	
Single Completion TOTAL ESTIMATED WELL COST		358,000.		84,100.	
TOTAL ESTIMATED DRY HOLE COST		273,900.			

These costs are only estimates and are subject to change.

70 Nov 2 PM 1 02

These costs are only estimates  
and are subject to change.

70 Nov 2 PM 1 02

REQUEST FOR ABOVE PROJECT  
MADE BY:

N.M.O.C.C.

PROJECT RECOMMENDED BY:

Michael P. Grace

PROJECT Compiled by:

William J. LeMay, agent

PROJECT APPROVED for N/2

and S/2 of Section 2  
remaining W.I. % PARTN

DUAL COMPLETION TOTAL ESTIMATED WELL COST: \$400,800.

$$S/2 = 61.7\%$$

$$N/2 = 51.7\%$$

$$320 \text{ Ac. AREA} = 13,937,200$$

$$.7854 D^2 = 13,937,200$$

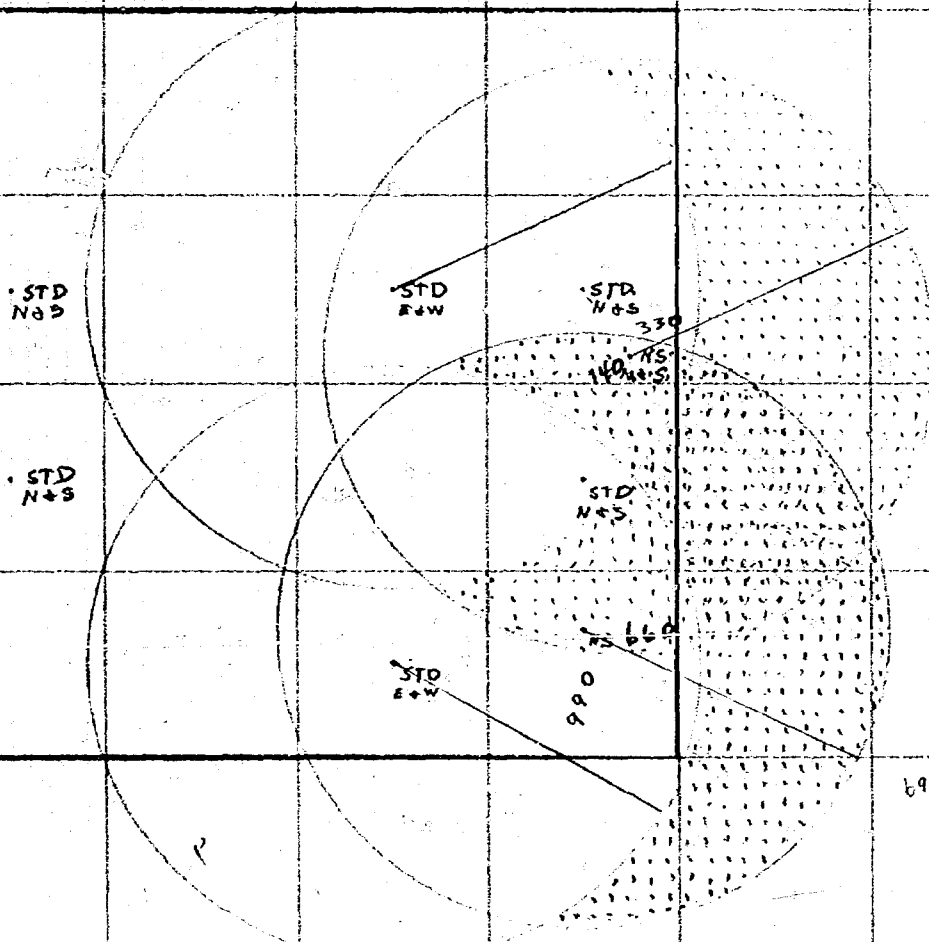
$$D^2 = \frac{13,937,200}{.7854}$$

$$D^2 = 17,747,840$$

$$D = 4213$$

$$r = 2106.5$$

$$\text{each } D = .4 \text{ Ac.}$$



$$\begin{array}{r} 83 \\ 96 \\ 69 \\ \hline 240 \\ 258 \\ \hline 29 \end{array}$$

29 8 2 of 13 1/2

$$130 \cdot 730$$

$$660 - 990$$

$$393 \times .4 = 157 \text{ Ac.}$$

$$\frac{157}{320} = .4906 - 1.0000 = .5094$$

$$309 \times .4 = 124 \text{ Ac.}$$

$$\frac{124}{320} = .3875 - 1.0000 = .6125$$

COUNTY	FIELD	PROR. OF COST	DATE WORK BEGAN	DATE OF COMPLETION
Adair Co.	Sa. Carlisbad	100%	7/3 1971	9/30/71

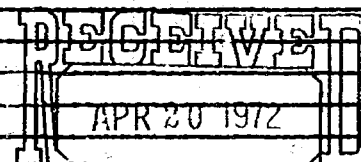
# DRILLING VENTURE TO EVALUATE PRODUCTIVE POSSIBILITIES OF (4) PENNSYLVANIA gas zones

## Work Detail

### INTANGIBLES

Location and Road: Title exam. & related work	3,871.00
Survey and Permit	437.32
Road and Location Preparation	477.36
Surface Damages	
Fencing-Filling Pits-Cleanup	1,367.19
Drilling Turnkey	175,679.40
ft. at per foot	
30 hrs W/D.P. Rig time at 71.875	2,242.50
13 hrs W/D.P. Rig time at 59.375	833.62
Drill Pipe - Tool Rental	
Bits at	
Bits at	
Reamer Cutters	
Core Barrel - Core Head Rental	
Day Work, Testing, Logging, etc	25,896.00
Casing Cementing	19,367.57
Squeeze Cementing or Plugging	
Logging - Sidewall Coring Log Suite (2)	16,035.58
Core Analysis	
Formation Testings D.S.T.'s (7)	7,644.00
Perforating	1,655.53
Acidizing and FRAC	
Special Rig Completing	35,640.20
Other Services Welding, etc.	412.78
Trucking	1,198.74
Geology	6,218.53
Engineering	8,544.31
Labor	
Logging Unit	
Tool and Equipment Rental	21,471.11
Water and Fuel	1,712.60
Casing Supplies	1,376.86
Drilling Mud and Chemicals	20,042.60
Company Supervision (\$800.00 per mo.)	6,100.00
Contingencies 5% (under 3%)	12,000.00
Temperature Surveys	2,844.91

Humble Grace #1  
Michael P. Grace and  
Corinne Grace - operators



Santa Fe

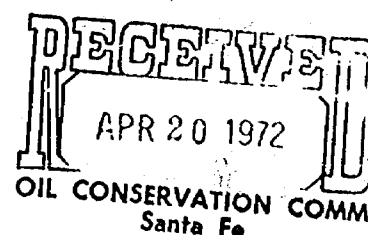
### Single Completion TOTAL INTANGIBLES

#### TANGIBLES

Casing, Conductor	
Casing, Surface 350' of 13 3/8"	2,038.80
Casing, Protection 5552' of 9 5/8"	26,358.86
Casing, Production 1100' of 4 1/2"	2,555.86
Casing, Other Bond coat 4 1/2, Ruff coat	1,186.67
Tubing, 161.05 of 2 3/8"	12,261.34
Packer	4,830.50
Casing, other - 11,707.95' 7"	40,386.66
Well Head Equipment	12,749.93
Surface Equipment	13,876.55
Single Completion TOTAL TANGIBLES	116,245.17
Single Completion TOTAL WELL COST	489,314.88

## ACCOUNTING

Humble Grace #1



Title Examination and Related Work: Federici, Montgomery et al Hinkle, Bondurant, Cox and Eaton	1,000.00 <u>2,871.00</u>	
		3,871.00
Location and Roads: John West Engineering Oil Reports and Gas Services	130.00 <u>307.32</u> 437.32	
		437.32
Road and Location preparation: Permian Anchor Paul Crumpacker Yeager Plumbing	160.16 208.00 <u>109.20</u> 477.36	
		477.36
Fencing, Filling Pits, Cleanup A. C. Drilling Specialties Pit Liners Paul Crumpacker Cellar Platform Burton Signs	800.75 434.20 100.00 <u>32.24</u> 1,367.19	
		1,367.19
Drilling: Christian Rat Hole Dicks Water Well Service Big West Drilling Tidwell Drilling Total Drilling Turnkey	312.00 6,825.00 161,595.20 <u>6,947.20</u> 175,679.40	
		175,679.40
Big West Drilling Day Work 30 hrs. w/d.p. at 71.875 13½ hrs. w/o d.p. at 59.375 Rig time for testing w/DP Logging - Sidewall Coring Log Suite (2)	2,242.50 833.62 <u>19,656.00</u> 6,240.00	
		28,972.12
Casing Cementing: Dowell	19,367.57	19,367.57
Logging - Sidewall Coring Log Suite (2) Dresser Atlas	16,035.58	16,035.58
Formation Testing: Halliburton D.S.T.'s (7)	7,644.00	7,644.00
Perforating: Go International	1,655.53	1,655.53
Special Rig Completing:*		
Well Units McCullough	274.18 11,509.80	
Lohman Otis Engineering	14,777.33	
	<u>9,078.89</u>	
Total Special Rig Completing:		35,640.20

\* Includes extensive fishing for perforating equipment.

Other Services - Welding Etc.*	56.16	
Jim's Welding	131.46	
Woody's Winch & Welding	51.48	
Lone Star Welders	46.80	
Jones Welding	126.89	
Mid Continent (sample bags)	412.78	412.78
Trucking:		
Atlas Trucking Co.	124.45	
Dale Meyer Trucking	72.10	
Frank C. Strech	852.19	
Air Freight	150.00	
	1,198.74	1,198.74
Geologists:		
Wesley Wiechmann	312.50	
Geo Tech	656.46	
W. R. Donnell	4,949.57	
W. R. Berger, Jr.	300.00	
	6,218.53	6,218.53
Engineering: *		
Neil R. Morgan	567.44	
Geo Tech	485.39	
L. R. Pomeroy	2,178.77	
Miller Engineering	705.98	
Ralph H. Viney	1,852.50	
Fritz Maxwell	400.00	
C. W. Kelley	600.00	
J. W. Simpson	500.00	
Conrad Appledorn	219.80	
PAL, Inc	415.95	
" "	618.48	
	8,544.31	8,544.31
Tool & Equipment Rental *		
Land and Marine	17,610.90	
ABC Rental Tool Co.	1,383.20	
Stevenson Roach	2,477.01	
	21,471.11	21,471.11
Water & Fuel		
I & W	56.16	
Nelson T. Pope	172.00	
Permian Corp.	64.98	
Hardin Houston	927.28	
City of Carlsbad	492.18	
	1,712.60	1,712.60
Casing Supplies:		
Bob's Casing Crews	1,376.86	1,376.86
Temp. Surveys & Testing *		
Gator Hawk	1,376.28	
Kirby & Cone	625.60	
Halliburton	385.84	
Bennett Wire Line	165.57	
Apex Engineering	161.62	
Cecil Horne Wireline	130.00	
	2,844.91	2,844.91

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OIL CONSERVATION COMM.  
Santa Fe

\* Includes extensive fishing for perforating equipment.



Drilling Mud and Chemicals

Delaware Mud	18,625.90	
Basin Chemical	551.00	
SEC	<u>865.70</u>	
	20,042.60	20,042.60

Company Supervision

6,100.00	6,100.00
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Contingencies 5% Blow out Ins  
Lloyds of London

12,000.00	12,000.00
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Casing & Tubing:

Gensco-13 3/8" Surface 410'	2,038.80
McDaniel 9 5/8" 5552'	26,358.86
McDaniel 7" 11,707.95'	40,386.66
McDaniel 4 1/2" 1100'	2,555.86
McDaniel 2 3/8" tubing 12,161.05'	12,261.34
Bond Coat - to Ruffcoat 4 1/2"	<u>1,186.67</u>

Total Casing & Tubing:

84,788.19

Packer:

Baker (paid thru Oilitex)	3,588.35
Permian	<u>1,242.15</u>

Total Packer:

4,830.50

Well Head Equipment:

Cameron	2,623.39
O.C.T.	<u>10,126.54</u>

Total Well Head Equipment:

12,749.93

Surface Equipment:

Sivall's and roustabout crew to install and trucking	12,776.55
Stevenson Roach Tank crew, etc	<u>1,100.00</u>

13,876.55

TOTAL:

489,314.88

RECEIVED  
APR 20 1972  
OIL CONSERVATION COMM  
Santa Fe

J. O. SETH (1883-1963)

A. K. MONTGOMERY  
WM. FEDERICI  
FRANK ANDREWS  
FRED C. HANNAHS  
RICHARD S. MORRIS  
SUMNER G. BUELL  
SETH D. MONTGOMERY  
FRANK ANDREWS III

MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & MORRIS  
ATTORNEYS AND COUNSELORS AT LAW  
350 EAST PALACE AVENUE  
SANTA FE, NEW MEXICO 87501

July 10, 1970

POST OFFICE BOX 2307  
AREA CODE 505  
TELEPHONE 982-3876

State of New Mexico  
Oil Conservation Commission of New Mexico  
State Land Office  
Santa Fe, New Mexico 87501

Re: Application of Michael P. and Corinne Grace  
for compulsory pooling and unorthodox well  
locations, Eddy County, New Mexico

Gentlemen:

Enclosed please find original and two copies of  
Application above-referred to for filing.

Please set this case down for hearing scheduled  
for August 5, 1970, before the Commission.

Very truly yours,

*Arthur H. Lopez*

OML:peg  
Enc.

cc Mobil Oil Corporation  
P.O. Box 663  
Midland, Texas 79701

Gulf Oil Corporation  
P.O. Box 1938  
Roswell, New Mexico 88201

Pan American Petroleum Corporation  
P.O. Box 1410  
Fort Worth, Texas

Humble Oil & Refining Corporation  
P.O. Box 1600  
Midland, Texas

Pennzoil United Incorporated  
P.O. Box 1828  
Midland, Texas

DOCKET MAILED

Date 7/23/70

000  
JUL 9 PM 4 49

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF MICHAEL P. GRACE  
and CORINNE GRACE, for Compulsory  
Pooling and Unorthodox Well  
Locations, Eddy County, New Mexico

Case No. \_\_\_\_\_

A P P L I C A T I O N

Come now the Applicants, MICHAEL P. GRACE and CORINNE GRACE, by and through their attorneys, MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & MORRIS, and respectfully state:

1. The Applicants are the owners of the NE $\frac{1}{4}$  and the S $\frac{1}{2}$  of the S $\frac{1}{2}$  and the NW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 2, T. 23 S., R. 26 E., N.M.P.M., Eddy County, New Mexico.

2. The Applicants propose to drill two wells on their acreage to test all formations down to and including the Morrow Sand of the lower Pennsylvanian Formation and to dedicate both the N $\frac{1}{2}$  and the S $\frac{1}{2}$  of Section 2 as the units for the proposed wells. The site locations for said wells are as follows:

(a) For the N $\frac{1}{2}$  of Section 2, the site location for the well is unorthodox and is 2500 feet from the North boundary and 330 feet from the East boundary;

(b) For the S $\frac{1}{2}$  of Section 2, the site location for the well is also unorthodox and is 990 feet from the South boundary and 660 feet from the East boundary.

3. The owners of the separately owned tract or tracts within the proposed spacing units have not agreed to pool their interests with the Applicants.

4. The Applicants submit that they should be designated operators of the proposed wells and spacing units.

5. The Applicants are prepared to advance the costs of development and operation and request the Commission to make provision for any owner or owners who elect not to pay their proper share in advance including a reasonable charge for supervision and the risk involved in drilling the wells.

WHEREFORE, the Applicants respectfully request the Commission to:

(1) Enter a compulsory pooling order pooling the  $N\frac{1}{2}$  and the  $S\frac{1}{2}$  of Section 2, T. 23 S., R. 26 E., N.M.P.M., Eddy County, New Mexico, into a drilling and spacing unit for all formations down to and including the Morrow Sand of the Lower Pennsylvanian Formation;

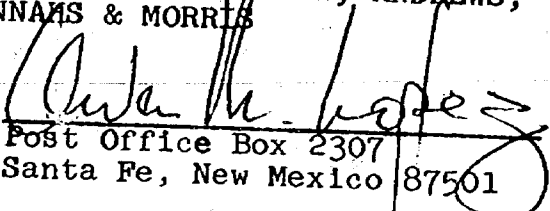
(2) Authorize the Applicants to drill a well 2500 feet from the North Boundary and 330 feet from the East Boundary in the  $N\frac{1}{2}$  of Section 2, T. 23 S., R. 26 E., N.M.P.M., and dedicating the  $N\frac{1}{2}$  of Section 2 to the proposed well and a well 900 feet from the South Boundary and 660 feet from the East Boundary in the  $S\frac{1}{2}$  of Section 2, T. 23 S., R. 26 E., N.M.P.M., and dedicating the  $S\frac{1}{2}$  of Section 2 to the proposed well;

(3) Designate the Applicants as the operators of said wells and make provision for any owner or owners who elect not to pay their proportionate share in advance including a reasonable charge for supervision and the risk involved in drilling the wells.

Respectfully submitted,

MONTGOMERY, FEDERICI, ANDREWS,  
HANNAH & MORRIS

BY:

  
Post Office Box 2307  
Santa Fe, New Mexico 87501

Attorneys for Applicants

Certificate of Mailing

I certify that I caused to be mailed a true and correct copy of the foregoing Application to the following operators of offset drilling location sites in Section 2, by Certified Mail, Return Receipt Requested, this 9th day of July, 1970.

Mobil Oil Corporation  
Post Office Box 663  
Midland, Texas 79701

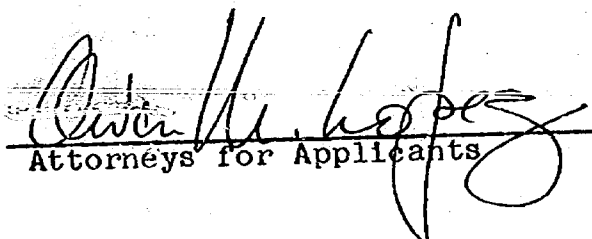
Gulf Oil Corporation  
Post Office Box 1938  
Roswell, New Mexico 88201

and to the following owners of leasehold interests in Section 2, also by Certified Mail, Return Receipt Requested, this 9th day of July, 1970.

Pan American Petroleum Corporation  
Post Office Box 1410  
Fort Worth, Texas

Humble Oil & Refining Corporation  
Post Office Box 1600  
Midland, Texas

Pennzoil United Incorporated  
Post Office Box 1828  
Midland Texas

  
Attorneys for Applicants

DRAFT

GMH/esr  
September 14, 1970

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 4398

Order No. R-4034

APPLICATION OF MICHAEL P. GRACE  
AND CORINNE GRACE FOR COMPULSORY  
POOLING AND UNORTHODOX GAS WELL  
LOCATIONS, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 5, 1970,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 30th day of September, 1970 the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

- (1) That due public notice having been given as required by

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicants, Michael P. Grace and Corinne Grace, seek an order pooling all mineral interests from the surface of the ground down to and including the Morrow formation underlying the N/2 and the S/2 of Section 2, Township 23 South, Range 26 East, NMPM, South Carlsbad Field Area, Eddy County, New Mexico, to be dedicated, respectively, to gas wells to be drilled at unorthodox locations as follows:

N/2 of Section 2 - Well to be located 2500 feet from the North line and 330 feet from the East line;

S/2 of Section 2 - Well to be drilled 990 feet from the South line and 660 feet from the East line.

- (3) That the runways of the Carlsbad Airport and a highway cross said Section 2, thereby, creating severe well location problems at standard locations.
- (4) That the establishment of spacing units comprising the E/2 and the W/2 of said Section 2 would make available one standard location in each of said half-sections.
- (5) That the ~~firm~~ establishment of spacing units comprising the N/2 and the S/2 of said Section 2 as requested by the applicants, <sup>precludes</sup> the availability of a standard location in either of said half-sections.

(6) ~~13~~ That the applicants have the right and propose to drill a well in each of the aforesaid half sections at the above-described unorthodox locations to test any and all formations down to and including the Morrow formation.

(7) ~~14~~ That there are interest owners in the proposed spacing units who have not agreed to pool their interests.

(8) (5) That the evidence indicates both the N/2 and S/2 of said Section 2 may be productive of gas from the South Carlsbad-Strawn, South Carlsbad-Atoka, or South Carlsbad-Morrow Gas Pools.

(9) ~~16~~ That to avoid the drilling of unnecessary wells, to protect correlative rights, and to afford the owner of each interest in the N/2 of said Section 2 the opportunity to recover or receive without unnecessary expense his just and fair share of the gas in the South Carlsbad-Strawn, South Carlsbad-Atoka, and South Carlsbad-Morrow Gas Pools, all mineral interests, whatever they may be in said pools, underlying the N/2 of said Section 2 should be pooled and dedicated to a well to be drilled as proposed by the applicants.

(10) ~~17~~ That to avoid the drilling of unnecessary wells, to protect correlative rights, and to afford the owner of each interest in the S/2 of said Section 2 the opportunity to recover or receive without unnecessary expense his just and fair share of the gas in the South Carlsbad-Strawn, South Carlsbad-Atoka, and South Carlsbad-Morrow Gas Pools, all mineral interests, whatever they may be in said pools, underlying the S/2 of said Section 2 should be pooled and dedicated to a well to be drilled as proposed by the applicants.

(11) ~~18~~ That the applicants should be designated the operators of the subject wells and units.

(12) ~~19~~ That any non-consenting working interest owner should be afforded the opportunity, as to each well, to pay his share



of estimated well costs to the operators in lieu of paying his share of reasonable well costs out of production.

(13) ~~120~~ That any non-consenting working interest owner that does not pay his share of estimated well costs for the well to be drilled in the N/2 of said Section 2 should have withheld from production from said well his share of the reasonable well costs of said well plus an additional 25% thereof as a reasonable charge for the risk involved in the <sup>drilling and</sup> completion of the well. (OK)

(14) ~~121~~ That any non-consenting working interest owner that does not pay his share of estimated well costs for the well to be drilled in the S/2 of said Section 2 should have withheld from production from said well his share of the reasonable well costs of said well plus an additional 25% thereof as a reasonable charge for the risk involved in the <sup>drilling and</sup> completion of the well. (OK)

(15) ~~122~~ That any non-consenting interest owner should be afforded the opportunity, as to each well, to object to the actual well costs but that said actual well costs should be adopted as the reasonable well costs in the absence of such objection.

(16) ~~123~~ That following determination of reasonable well costs, as to each well, any non-consenting working interest owner that has paid his share of estimated costs should pay, as to each well, to the operators any amount that reasonable well costs exceed estimated well costs and should receive from the operators any amount that paid estimated well costs exceed reasonable well costs.

(17) ~~124~~ That \$100.00 per month should be fixed as a reasonable charge for supervision (combined fixed rates) for each of the subject wells; that the operators of the subject wells should be authorized to withhold from production the proportionate share of such supervision charge attributable to each non-consenting

working interest, and in addition thereto, the operators should be authorized to withhold from production the proportionate share of actual expenditures required for operating the subject wells, not in excess of what are reasonable, attributable to each non-consenting working interest.

(17) (15) That all proceeds from production from the subject wells which are not disbursed for any reason should be placed in escrow to be paid to the true owner thereof upon demand and proof of ownership.

(17) (16) That due to the unorthodox locations of the above-described wells, the correlative rights of some offset operators will be impaired if unrestricted production by the subject wells is permitted.

(20) (17) That to offset the advantage to be gained over offset operators, the well to be drilled in the N/2 of Section 2 should be assigned a ratable-take factor of <sup>51</sup>~~41~~ per cent *as to each producing zone.*

(21) (18) That to offset the advantage to be gained over offset operators, the well to be drilled in the S/2 of Section 2 should be assigned a ratable-take factor of <sup>61</sup>~~55~~ per cent *as to each producing zone.*

(22) (19) That approval of the proposed unorthodox locations will not violate correlative rights and will afford the applicants the opportunity to produce their just and equitable share of the gas in the above-described pools, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste, provided the above-described ratable take factors are assigned to the subject wells.

is assigned a ratable-take factor of 70%.

(SEE UNDER)

(3) That Michael P. Grace and Corinne Grace are hereby designated the operators of the subject wells and units.

Same as other  
provided further  
Sept 9.61

(4) That the operators shall furnish the Commission and each known working interest owner in the N/2 of said Section 2 an itemized schedule of estimated well costs, as to the well to be drilled in the N/2 of said Section 2, at least 30 days prior to commencing the drilling of said well.

(5) That the operators shall furnish the Commission and each known working interest owner in the S/2 of said Section 2 an itemized schedule of estimated well costs, as to the well to be drilled in the S/2 of said Section 2, at least 30 days prior to commencing the drilling of said well.

(6) That within 30 days from the date the schedules of estimated well costs, as to each well, are furnished to him, any non-consenting working interest owner shall have the right to pay his share of estimated well costs, as to each well, to the operators in lieu of paying his share of reasonable well costs, as to each well, out of production, and that any such owner who pays his share of estimated well costs as provided above shall remain liable for operating costs but shall not be liable for risk charges.

(7) That the operators shall furnish the Commission and each known working interest owner in the subject units an itemized schedule of actual well costs as to each well within 30 days following completion of each well; that if no objection to the actual well costs is received by the Commission and the Commission has not objected within 60 days following completion of each well, the actual well costs shall be the reasonable well costs; provided, however, that if there is an objection to actual well costs within said 60-day period, the Commission will determine reasonable well costs after public notice and hearing.

(8) That within 30 days following determination of reasonable well costs, as to each well, any non-consenting working

interest owner that has paid his share of estimated costs in advance as provided above shall pay to the operators his pro rata share of the amount that reasonable well costs exceed estimated well costs and shall receive from the operators his pro rata share of the amount that estimated well costs exceed reasonable well costs.

(9) That the operators are hereby authorized, as to each well, to withhold the following costs and charges from production:

- (A) The pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.
- (B) As a charge for the risk involved in the <sup>completion</sup> of the well, 25% of the pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.

(10) That the operators shall distribute said costs and charges withheld from production to the parties who advanced the well costs.

(11) That \$100.00 per month is hereby fixed as a reasonable charge for supervision (combined fixed rates) for each of the subject wells; that the operators are hereby authorized, as to each of the subject wells, to withhold from production the proportionate share of such supervision charge attributable to each non-consenting working interest, and in addition thereto, the operators are hereby authorized to withhold from production the proportionate share of actual expenditures required for operating the subject wells, not in excess of what are reasonable, attributable to each non-consenting working interest.

(12) That any unsevered mineral interest shall be considered a seven-eighths (7/8) working interest and a one-eighth (1/8) royalty interest for the purpose of allocating costs and charges under the terms of this order.

(13) That any well costs or charges which are to be paid out of production shall be withheld only from the working interests' share of production, and no costs or charges shall be withheld from production attributable to royalty interests.

(14) That all proceeds from production from the subject wells which are not disbursed for any reason shall be placed in escrow in Eddy County, New Mexico, to be paid to the true owner thereof upon demand and proof of ownership; that the operators shall notify the Commission of the name and address of said escrow agent within 90 days from the date of this order.

(15) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 4398  
Order No. R-4034

APPLICATION OF MICHAEL P. GRACE  
AND CORINNE GRACE FOR COMPULSORY  
POOLING AND UNORTHODOX GAS WELL  
LOCATIONS, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BEFORE THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 5, 1970,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 2nd day of October, 1970, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicants, Michael P. Grace and Corinne Grace,  
seek an order pooling all mineral interests from the surface of  
the ground down to and including the Morrow formation underlying  
the N/2 and the S/2 of Section 2, Township 23 South, Range 26 East,  
NMPM, South Carlsbad Field area, Eddy County, New Mexico, to be  
dedicated, respectively to gas wells to be drilled at unorthodox  
locations as follows:

N/2 of Section 2 - Well to be located 2500 feet from the  
North line and 330 feet from the East  
line;

S/2 of Section 2 - Well to be drilled 990 feet from the  
South line and 660 feet from the East  
line.

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CASE No. 4398  
Order No. R-4034

(3) That the runways of the Carlsbad Airport and a highway cross said Section 2, thereby creating severe well location problems at standard locations.

(4) That the establishment of spacing units comprising the E/2 and the W/2 of said Section 2 would make available one standard location in each of said half sections.

(5) That the establishment of spacing units comprising the N/2 and the S/2 of said Section 2 as requested by the applicants precludes the availability of a standard location in either of said half sections.

(6) That the applicants have the right and propose to drill a well in each of the aforesaid half sections at the above-described unorthodox locations to test any and all formations down to and including the Morrow formation.

(7) That there are interest owners in the proposed spacing units who have not agreed to pool their interests.

(8) That the evidence indicates both the N/2 and S/2 of said Section 2 may be productive of gas from the South Carlsbad-Strawn, South Carlsbad-Atoka, or South Carlsbad-Morrow Gas Pools.

(9) That to avoid the drilling of unnecessary wells, to protect correlative rights, and to afford the owner of each interest in the N/2 of said Section 2 the opportunity to recover or receive without unnecessary expense his just and fair share of the gas in the South Carlsbad-Strawn, South Carlsbad-Atoka, and South Carlsbad-Morrow Gas Pools, all mineral interests, whatever they may be in said pools, underlying the N/2 of said Section 2 should be pooled and dedicated to a well to be drilled as proposed by the applicants.

(10) That to avoid the drilling of unnecessary wells, to protect correlative rights, and to afford the owner of each interest in the S/2 of said Section 2 the opportunity to recover or receive without unnecessary expense his just and fair share of the gas in the South Carlsbad-Strawn, South Carlsbad-Atoka, and South Carlsbad-Morrow Gas Pools, all mineral interests, whatever they may be in said pools, underlying the S/2 of said Section 2 should be pooled and dedicated to a well to be drilled as proposed by the applicants.

(11) That the applicants should be designated the operators of the subject wells and units.

(12) That any non-consenting working interest owner should be afforded the opportunity, as to each well, to pay his share of estimated well costs to the operators in lieu of paying his share of reasonable well costs out of production.

(13) That any non-consenting working interest owner that does not pay his share of estimated well costs for the well to be drilled in the N/2 of said Section 2 should have withheld from production from said well his share of the reasonable well costs of said well plus an additional 25% thereof as a reasonable charge for the risk involved in the drilling and completion of the well.

(14) That any non-consenting working interest owner that does not pay his share of estimated well costs for the well to be drilled in the S/2 of said Section 2 should have withheld from production from said well his share of the reasonable well costs of said well plus an additional 25% thereof as a reasonable charge for the risk involved in the drilling and completion of the well.

(15) That any non-consenting interest owner should be afforded the opportunity, as to each well, to object to the actual well costs but that said actual well costs should be adopted as the reasonable well costs in the absence of such objection.

(16) That following determination of reasonable well costs, as to each well, any non-consenting working interest owner that has paid his share of estimated costs should pay, as to each well, to the operators any amount that reasonable well costs exceed estimated well costs and should receive from the operators any amount that paid estimated well costs exceed reasonable well costs.

(17) That \$100.00 per month should be fixed as a reasonable charge for supervision (combined fixed rates) for each of the subject wells; that the operators of the subject wells should be authorized to withhold from production the proportionate share of such supervision charge attributable to each non-consenting working interest, and in addition thereto, the operators should be authorized to withhold from production the proportionate share of actual expenditures required for operating the subject wells, not in excess of what are reasonable, attributable to each non-consenting working interest.

(18) That all proceeds from production from the subject wells which are not disbursed for any reason should be placed in escrow



-4-

CASE No. 4398  
Order No. R-4034

to be paid to the true owner thereof upon demand and proof of ownership.

(19) That due to the unorthodox locations of the above-described wells, the correlative rights of some offset operators will be impaired if unrestricted production by the subject wells is permitted.

(20) That to offset the advantage to be gained over offset operators, the well to be drilled in the N/2 of Section 2 should be assigned a ratable-take factor of 51 per cent as to each producing zone.

(21) That to offset the advantage to be gained over offset operators, the well to be drilled in the S/2 of Section 2 should be assigned a ratable-take factor of 61 per cent as to each producing zone.

(22) That approval of the proposed unorthodox locations will not violate correlative rights and will afford the applicants the opportunity to produce their just and equitable share of the gas in the above-described pools, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste, provided the above-described ratable-take factors are assigned to the subject wells.

IT IS THEREFORE ORDERED:

(1) That all mineral interests, whatever they may be, in the South Carlsbad-Strawn, South Carlsbad-Atoka, and South Carlsbad-Morrow Gas Pools underlying the N/2 of Section 2, Township 23 South, Range 26 East, NMPM, Eddy County, New Mexico, are hereby pooled to form a 320-acre gas spacing unit and dedicated to a well to be drilled at an unorthodox location 2500 feet from the North line and 330 feet from the East line of said Section 2;

PROVIDED HOWEVER, that as to each of said pools, said well is assigned a ratable-take factor of 51%;

PROVIDED FURTHER, that in the event any of said pools be prorated, the subject well as to such prorated pool shall be assigned an acreage factor for proration purposes of 0.51.

(2) That all mineral interests, whatever they may be, in the South Carlsbad-Strawn, South Carlsbad-Atoka, and South Carlsbad-Morrow Gas Pools underlying the S/2 of Section 2, Township 23

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South, Range 26 East, NMPM, Eddy County, New Mexico, are hereby pooled to form a 320-acre gas spacing unit and dedicated to a well to be drilled at an unorthodox location 990 feet from the South line and 660 feet from the East line of said Section 2;

PROVIDED HOWEVER, that as to each of said pools, said well is assigned a ratable take factor of 61%;

PROVIDED FURTHER, that in the event any of said pools be prorated, the subject well as to such prorated pool shall be assigned an acreage factor for proration purposes of 0.61.

(3) That Michael P. Grace and Corinne Grace are hereby designated the operators of the subject wells and units.

(4) That the operators shall furnish the Commission and each known working interest owner in the N/2 of said Section 2 an itemized schedule of estimated well costs, as to the well to be drilled in the N/2 of said Section 2, at least 30 days prior to commencing the drilling of said well.

(5) That the operators shall furnish the Commission and each known working interest owner in the S/2 of said Section 2 an itemized schedule of estimated well costs, as to the well to be drilled in the S/2 of said Section 2, at least 30 days prior to commencing the drilling of said well.

(6) That within 30 days from the date the schedules of estimated well costs, as to each well, are furnished to him, any non-consenting working interest owner shall have the right to pay his share of estimated well costs, as to each well, to the operators in lieu of paying his share of reasonable well costs, as to each well, out of production, and that any such owner who pays his share of estimated well costs as provided above shall remain liable for operating costs but shall not be liable for risk charges.

(7) That the operators shall furnish the Commission and each known working interest owner in the subject units an itemized schedule of actual well costs as to each well within 30 days following completion of each well; that if no objection to the actual well costs is received by the Commission and the Commission has not objected within 60 days following completion of each well, the actual well costs shall be the reasonable well costs; provided, however, that if there is an objection to actual well costs within said 60-day period, the Commission will determine reasonable well costs after public notice and hearing.

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(8) That within 30 days following determination of reasonable well costs, as to each well, any non-consenting working interest owner that has paid his share of estimated costs in advance as provided above shall pay to the operators his pro rata share of the amount that reasonable well costs exceed estimated well costs and shall receive from the operators his pro rata share of the amount that estimated well costs exceed reasonable well costs.

(9) That the operators are hereby authorized, as to each well, to withhold the following costs and charges from production:

(A) The pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.

(B) As a charge for the risk involved in the drilling and completion of the well, 25% of the pro rata share of reasonable well costs attributable to each non-consenting working interest owner who has not paid his share of estimated well costs within 30 days from the date the schedule of estimated well costs is furnished to him.

(10) That the operators shall distribute said costs and charges withheld from production to the parties who advanced the well costs.

(11) That \$100.00 per month is hereby fixed as a reasonable charge for supervision (combined fixed rates) for each of the subject wells; that the operators are hereby authorized, as to each of the subject wells, to withhold from production the proportionate share of such supervision charge attributable to each non-consenting working interest, and in addition thereto, the operators are hereby authorized to withhold from production the proportionate share of actual expenditures required for operating the subject wells, not in excess of what are reasonable, attributable to each non-consenting working interest.

(12) That any unsevered mineral interest shall be considered a seven-eighths (7/8) working interest and a one-eighth (1/8)

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royalty interest for the purpose of allocating costs and charges under the terms of this order.

(13) That any well costs or charges which are to be paid out of production shall be withheld only from the working interests' share of production, and no costs or charges shall be withheld from production attributable to royalty interests.

(14) That all proceeds from production from the subject wells which are not disbursed for any reason shall be placed in escrow in Eddy County, New Mexico, to be paid to the true owner thereof upon demand and proof of ownership; that the operators shall notify the Commission of the name and address of said escrow agent within 90 days from the date of this order.

(15) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

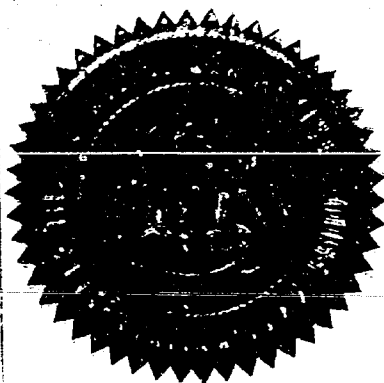
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
DAVID F. CARGO, Chairman

  
ALEX J. ARMIJO, Member

  
A. L. PORTER, Jr., Member & Secretary



esr/