NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MAY 10, 1989 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
DAVID MILLER	BASS ENTERPRISES	MIDLAND, TX
Louis Wilpitz	Bass Enterprises Production Co.	Fort Worth TX
William F. Carr	Campbell + Black, P.A.	Santa Fe
W. T. Kellahin	Kellahin Kellahin & Aubrey	Santa Fe
DAN NUTTER	CONS ENGR	Santa Fe
Bob Brown	Bryram	Santa Fe
KENT LUND	AMOCO PRODUCTION	DENVER
R. Blake Kendrick	El Paso Natural Gas	El Paso Tx
Owen Lopez	Hinkle Law Firm	Santa Fe, N.M.
W. Perry Pearce	Montgomery & Andrews	Santa Fe, NM
VIC LYON	OCD	S.F.
Jack Ahlen	Curry and Thornton	Roswell
Louis J. Mazzullo	Nearburg Producing Co	Midland, TX
John Roe	Dugan Production Corp	Farmington
SCOTT HALL	CAMPBELL + BLACK	SF
Bill Owen	DAVID PENDLETON Nearburg Producing	Roswell Dallas - Midland

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NAME	REPRESENTING	LOCATION
Joel Lowrie	Gas Company of New Mexico	Alb, NM
Ernest L. Padilla	Padilla & Snyder	Santa Fe, NM
MICHAEL HEDRICK	MUSSELMAN OWEN & KING OPERATING, INC.	MIDLAND, TX
Jim Sikes	BP EXPLORATION INC	Houston, TX
Dave Johnson	BP Exploration Inc	Houston, Tx
KIRK MOORE	ORYX ENERGY COMPANY	DALLAS, TX
JACK A. MORGAN	U.S. RESOURCES, INC.	DALLAS, TX
Jim Bianchan	J & L Exploration	Roswell, NM
RICHARD DILLON	SUN E&P CO / ORYX ENERGY CO.	MIDLAND TX
PATRICK GALVIN	ORYX ENERGY Co. (SUN)	MIDLAND, TX
Chris Phillips	NMEO operating (MESA GRANDE Ltd)	TULSA, OK

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

10 May 1989

EXAMINER HEARING

IN THE MATTER OF:

Application of Bass Enterprises Production Company for compulsory pooling, Lea County, New Mexico, and	CASE 9664
Application of Bass Enterprises Production Company for compulsory pooling, Lea County, New Mexico.	9665

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

For Bass Enterprises Production Company:

W. Thomas Kellahin
Attorney at Law
KELLAHIN, KELLAHIN & AUBREY
P. O. Box 2265
Santa Fe, New Mexico 87504

I N D E X

E X H I B I T S

E X H I B I T S Cont'd

MR. STOGNER: I'll call next Case Number 9664, which is the application of Bass Enterprises Production Company for compulsory pooling in Lea County, New Mexico.

At this time I'll call for appearances.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin & Aubrey, appearing on behalf of the applicant and I have three witnesses.

MR. STOGNER: Are there any other appearances?

Will the witnesses please stand and be sworn at this time?

Raise your right hands.

(Witnesses sworn.)

MR. STOGNER: You may be seated. Mr. Kellahin.

MR. KELLAHIN: Mr. Examiner, for hearing purposes we'd like to consolidate Case 9664, which you've just called, with the next case, 9665. These two spacing units, each of which are to be pooled, involved similar wells to similar depths and the testimony is com-

patible for each case and I think can be heard as a consolidated matter.

MR. STOGNER: If there are no objections Case Number 9665 will be called at this time, which is the application of Bass Enterprises Production Company for compulsory pooling, Lea County, New Mexico.

Let the record show, I believe, Mr. Kellahin, that these three witnesses that were sworn in on the previous case, will also be testifying?

MR. KELLAHIN: Yes, Mr. Examiner.

MR. STOGNER: Let the record so show.

Mr. Kellahin.

MR. KELLAHIN: Mr. Examiner, the exhibits have been marked separately for each case but we will simply use one set of the exhibits. The geologic exhibits, I believe, are identical for each case and there are some small changes in the correspondence used by the landman in order to obtain voluntary agreement, but for the most part, on all substantive issues the exhibits will be the same for each case.

LOUIS W. WILPITZ,

being called as a witness and being duly sworn upon his

oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A My name is Louis Wilpitz and I'm a petroleum landman with Bass Enterprises Production Company in Ft. Worth, Texas.

Q Mr. Wilpitz, would you spell your last name for us?

A Sure. W-I-L-P-I-T-Z.

Q Mr. Wilpitz, let me have you direct your attention to what is marked as Bass Exhibit Number One in Case 9664 and before we describe some of the details shown on the display, would you simply show us what this exhibit is?

A Yes. It's a plat of the area that we're interested in. The yellow portions of the map indicate Bass Enterprises leases that we own 100 percent. The blue area represents farmout acreage we have committed to ourselves.

MR. KELLAHIN: Excuse me, Mr. Examiner, I can't hear here.

Q All right, sir, please identify Exhibit

Number One.

A Okay. The yellow portions of the map are the Bass leases owned 100 percent by Bass Enterprises.

The blue areas cover lands we've entered into farmout agreements with leasehold owners in those tracts with, and the red indicates the proration unit that we're concerned with for the forced pooling hearings.

Q For Case 9664 it's advertised as a compulsory pooling for the drilling of the Reeves 21 State No. 2 Well. In what quarter section is that well located?

A The northwest quarter of the southeast quarter of Section 21.

Q All right, it would be a 40-acre dedication?

A Yes, sir.

Q And what is the primary producing formation that you're seeking to produce from?

A The Reeves Queen.

Q For Case 9665 will you show us the 40-acre tract for which that well is proposed?

A Yes. It's also shown on Exhibit One and is the northeast quarter of the southeast quarter of Section 21.

Q Describe for us what has been your particular involvement as a petroleum landman on behalf of

your company.

A After determining the ownership in the two 40-acre tracts that we're interested in, we made initial contact with the owners under letter of August 25th, which is shown as Exhibit Three.

Q What's the purpose of doing so, Mr. Wilpitz?

A We were endeavoring to -- to obtain either a farmout support or participation in the drilling of a well in those two tracts voluntarily.

Q And were you the landman involved in trying to obtain voluntary agreement on both tracts for the working interest ownership?

A Yes, sir, that's correct.

Q Have you on prior occasions testified before the Oil Conservation Division?

A No, I have not.

Q Would you take a moment and describe your educational and employment experience as a petroleum landman?

A Okay. I received a Bachelor of Science degree in economics from Texas A & M University in 1980 and began employment with Bass Enterprises Production Company in the Land Department in October of 1981 and have been there since.

MR. KELLAHIN: At this point, Mr. Examiner, we tender Mr. Wilpitz as an expert petroleum landman.

MR. STOGNER: Mr. Wilpitz is so qualified.

Q Let's take a moment now, sir, and go to what is marked as Exhibit Number Two. Describe for us what that is.

A Exhibit Two is a listing of the parties in the north half of the southeast quarter of Section 21 that as of today we have not received commitments from who executed contracts to either participate or farmout in these two wells.

Q Will these parties be the same parties in either well holding the same percentage working interest in each well?

A They'll be identical in both wells.

Q As of today, approximately what percentage does Bass have committed on a voluntary basis for the drilling of the well?

A We have 37 percent to date that is committed to farmout to us on the well.

Q On each of the spacing units.

A That's correct.

MR. STOGNER: I'm sorry, what

percentage?

A 37 percent.

MR. STOGNER: 37 percent.

Q When we look at Exhibit Number Two, the balance, then, is totaled and shows an uncommitted interest of just short of 63 percent?

A That's correct, in both tracts.

Q What efforts have been made by Bass to contact these individuals and attempt to obtain from them voluntary commitments either on participation or by farmout in each of the wells?

A We -- those efforts are set forth in the exhibits that we have indicated as first the Number Three, Exhibit Number Three in both cases, letter of August 25th, 1988. Jens Hansen of our company wrote an initial letter requesting support of a well in those tracts through farmout agreements or participation.

Then nextly, under letter of March 14th, 1989, and letter of March 29th, 1989, we contacted the parties again being more specific as to what our requests were.

And then last week under letters of April 6th, 1989, and April 10th, 1989, we contacted once again by letter stating that we were having to move ahead on this and were needing their participation or farmout to

us in order to support these wells.

Q Describe for us in a general way what occurred from August of 1988 to March 14th of 1989, during that period of time.

A Two general things occurred during that period of time, the first of which is we were negotiating a farmout agreement with HEYCO, et al, the parties that own 37 plus percent in there. Over that period of time we were negotiating the farmout on the north half of the southeast quarter and other lands.

Also during that time we had attempted to make telephone contacts with the parties listed on Exhibit Two and received very little response to our requests in following up by telephone on our letters, and had contacted everyone and did make telephone contact with all of the parties listed on Number Two around the period of the March 14th letter as Exhibit Number Four, before that was sent. So we did make telephone contact with them all and apprise them of where our directions were in the area.

Q What, if any, response did you receive from any of the parties to be pooled to the March 14th, 1989 letter?

A We received no response until that time but upon saying that we would -- would need to file a pooling action, we did receive phone calls from a couple of

parties and have had some -- some further communication that they want to either participate or farmout with us.

Q Notwithstanding those conversations and correspondence with each of these parties, as of today's hearing do you have commitments in writing from any of those parties for either participation or farmout for each of the wells?

A No, sir, not yet; not as of yet. We're still communicating on that.

Q Describe for us Exhibit Number Five.

A Exhibit Number Five was a letter of March 29th, 1989, which was addressed to Yates Exploration, Inc., in Cibola out of Albuquerque, proposing and requesting their support of the Reeves 21 State Well No. 2 in Case 9664. An identical letters was sent out only being changed to reflect the particulars of the No. 3 Well under Case No. 9665.

Q All right, sir, would you identify and describe for us Exhibit Number Six?

A Exhibit Number Six was a letter regarding the Reeves State Well No. 2 and also the Reeves State Well No. 3 and their respective cases that were sent to all of the parties on Exhibit Two except for Yates Exploration and Cibola Exploration, where we were narrowing the -- the process and confirming the time at which we would file an

application for a compulsory pooling.

Q All right, sir, would you identify and describe Exhibit Number Seven?

A Yes, sir. Exhibit Number Seven in both cases was almost identical in content to the letter as Exhibit Number Six, except that this letter was sent to Yates Exploration and Cibola.

Q In your opinion, Mr. Wilpitz, do you at this time in order to effect the formation of spacing units for each of the wells need compulsory pooling orders from the Oil Conservation Division?

A I believe it's absolutely necessary.

MR. KELLAHIN: That concludes my examination of Mr. Wilpitz, Mr. Examiner. We would move the introduction of at this time of his exhibits One through Seven in Case 9664, as well as Case 9665.

MR. STOGNER: Exhibits One through Seven will be admitted into evidence at this time.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Wilpitz, it appears that the King Ranch Oil & Gas, Incorporated, out of Houston, Texas, is the single biggest party which is being pooled today. Has there been any telephone conversations?

A Yes, sir, we've had more than three telephone contacts with their Land Department.

Q And approximately what dates, how long ago?

A Those -- those calls were -- there were three telephone calls that I recall between the August 25th and March 14th, 1989 letters, and their opinion is that they're not, in the words of their Land Department, not up to speed on this area and prefer to be pooled and just go under the pooling order, was the last contact I had with them, with their Land Department.

MR. STOGNER: I have no further questions of this witness. Are there any other questions of Mr. Wilpitz?

MR. KELLAHIN: No, sir.

MR. STOGNER: You may be excused.

DAVID MILLER,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q All right, sir, would you please state

your name and occupation?

A Yeah, my name is David Miller. I am a contract consulting geologist working full time for Bass Enterprises Production Company in Midland, Texas.

Q Mr. Miller, on a prior occasion have you testified before the Division as a petroleum geologist?

A No, sir, I have not.

Q Would you take a moment and describe for us your educational background?

A Yeah, I have a Bachelor's degree in geology from Texas A & M in 1959 and Master's degree in 1961.

Q Would you describe what has been your employment experience as a petroleum geologist subsequent to graduation?

A Okay. I worked 16 years for Exxon Company USA. My last position prior to resignation was as District Geologist of the Midland Production District.

I've worked two years for Petrus Oil Company, four years for Henry Petroleum in Midland as Exploration Manager, and I've been with Bass for the past almost two years

Q With regards to the two Queen wells that are the subject of this application, would you generally describe what it is that you've done?

A Okay. I have done the geology. I did correlate the logs. I've picked the top of pay, the base of pay, the net effective pay in these -- in the surrounding wells in this, oh, about a 15-section area, and have determined that Bass does have a drilling prospect, and have written up same.

Q As a result of that study are you able to reach an expert geologic opinion with regards to a recommendation for the Examiner for a risk factor penalty to be assessed against the working interest owners that elect not to participate in the well?

A I believe that I am, sir.

Q Are you familiar with the statutory fact that the examiner is allowed to assess a risk factor penalty of up to 200 percent?

A Yes, sir.

Q Within that range of discretion for the Examiner, what is your recommendation and opinion for a risk factor penalty?

A In this case I believe the risk is sufficient to expect the -- or request the maximum penalty, 200 percent.

Q Does that apply for each well?

A Yes, sir, it does.

Q Regardless of the fact of how the wells

are drilled and what particular sequence?

A Yes, sir, it does.

Q Let's have you give us the reasons for that opinion and in order to discuss with you in some detail your justification, let me direct your attention first of all to Exhibit Number Eight. Would you identify that for us, please?

A Okay. This is a location plat or location map showing the 9-township -- I mean the 9-section area in 18 South, 35 East, with the Section 21 centered, showing the locations that Bass is here proposing today.

This also shows the other wells in the area and I have highlighted for each case the Well No. 2 and the Well No. 3, the wells that we are here today requesting to force pool.

Q No. 2 is in the northwest of the southeast?

A That is correct.

Q No. 3 is in the northeast of the southeast.

A That is correct.

Q The principal geologic formation that you desire to test is what, sir?

A Is the Queen Sand.

Q All right. Let's go to Exhibit Number

Nine. In examining the offsetting wells that are shown on this display, identify for us the closest offsetting Queen producers.

A Okay, the closest offsetting Queen producers are in the northeast quarter of Section 28, which is south of the Bass proposed locations.

Q And how are those wells named or identified?

A Okay, these wells are the Tamarack operated ARCO State 28 No. 1 in the northeast quarter of the northeast quarter and the No. 2 in the northwest quarter of the northeast quarter.

Q When we look at the northwest quarter of 27, which will bet he diagonal southeast offset for your section --

A Yes, sir.

Q Do we have any wells that penetrated the Queen formation in that 160-acre tract?

A There are many wells that penetrated the Queen. In fact all the wells in this section penetrated the Queen Section. The wells indicated with the hexagons and the triangles are deep completions or deep tests. The most significant well in this section is the Hondo well which is in the northwest quarter of the northwest quarter. This well was drilled in March of --

A Excuse me, the Hondo well is not shaded in any color.

A It is not shaded.

Q It is shaded as a --

A As a dry hole.

Q -- dry hole symbol right just below the "H" of Hondo?

A That is correct, yes, sir.

Q All right. Tell us about that well.

A Okay, that well was drilled in March and April of this year; was plugged and abandoned after penetrating of the Queen formation. It was evaluated with open hole logs, with a mud log. The well did not have sufficient porosity developed to -- to be commercially productive and the well was plugged without setting pipe.

Q Was the Hondo well attempted after the two completions were made successful in the northeast quarter of 28?

A Yes, sir.

Q What do you conclude by that sequence of events, Mr. Miller?

A I conclude that the Queen porosity is very erratic in this area and that drilling a direct offset to a producing well does not insure that you will have a commercial well.

The porosity -- the sand is present, the porosity is plugged by anhydrites and salts and it is very erratic where you will find the porosity and I have another example to that, which is the Occidental Petroleum well in the northeast quarter of the northwest quarter of Section 28.

This well was drilled in 1988 as a direct offset to the Tamarack No. 2 ARCO State and this well again had the sand present; there was very little porosity.

It is pretty much a rule of thumb in this area that if you have less than 10 percent porosity in this sand it will not produce commercial quantities of oil. The Hondo well had porosity. The maximum porosity was about 8 percent and that was only in about 4 feet of the overall 10 feet of sand.

Q When we look to the east of Section 21, do you have any subsurface geologic control for the Queen as we move into Section 22?

A Yes, sir, I do. I have subsurface control in the northwest quarter, the southwest quarter, and the southeast quarter of Section 22.

Q Do we have any commercial Queen production in the west half of 22?

A There is one well, the Hondo well which

is the label No. 3 in the southeast quarter of the southwest quarter, is a commercial Queen well in Section 22.

Q As we move to the north of the spacing units in Section 21, do you have any commercial Queen production?

A No, sir, we do not.

Q And as we look to the west of the spacing units the Queen production is over in 20?

A There are two wells in Section 20 that have been completed in the Queen. The No. 1, Collier No. 1 Well is completed in this same zone. It's very easy to correlate this -- this zone of porosity. This well has made gas but no oil.

The No. 2 Well in the southeast quarter of that section potentialed as a gas well. Apparently it has never been hooked up to a pipeline as there is no production reported in the State reports from that well.

Q Have you attempted to map the Queen on a structural basis?

A Yes, sir, I have.

Q Is that shown on Exhibit Number Ten?

A That is, yes, sir.

Q Let's go to Exhibit Number Ten and have you describe that display for us.

A Okay. This is a structure map on the

top of the Queen Sand in this -- this area. The contour interval is 20 feet. The scale of the map is one inch equal 2000 feet. And what this map shows is that in this area the Queen structure is a Strawn nose which is trending from the northwest to the southeast and this is approximately perpendicular to the regional trend for the Queen in this area and I believe it reflects the drape of the Queen for these formations over a deep-seated fault feature that is at depth.

Q Is structure significant in helping you find a well location in the southeast quarter of Section 21?

A Structure is significant in that it's -- the Queen zone seems to -- the Queen porosity seems to follow the structure more but the porosity is definitely the most important thing as this is predominantly a stratigraphic trap play.

Q As we move from the Hondo wells in the north half of 28, moving north through Section 21, are you able to establish with reasonable geologic probability the location and shape of the structure as we go into Section 21?

A I believe I can give a reasonable interpretation of the structure in 21 in that I have penetrations on the north of 21 and also in 16; penetrations in

20, 28, 22.

I do not have penetrations in the south half or the northwest quarter of Section 21, so it is not definite, but I believe I have enough data to come up with a reasonable geologic interpretation.

Q Does the extent of geologic data available at this point allow you to reach an opinion such that the risk to be assessed against the nonconsenting owners is less than 200 percent for each of these wells?

A I do not believe the risk should be less than 200 percent, no, sir.

Q Let's turn to Exhibit Number Eleven, Mr. Miller, and would you identify and describe that exhibit for us?

A Okay. This is a net effective pay map of the Queen Sand that I have drawn based on a porosity cutoff of equal to or greater than 10 percent. The scale is again one equal to 2000 feet and the contour interval is 5 feet.

Q What's your conclusion about the information shown on the isopach?

A Okay, my conclusion is that the fairlane of porosity is a very narrow trend; that it is well defined in Section 27, pretty well defined in Section 28, and 22. There is -- of course I have very little data to -- in Sec-

tion 21 to -- to make my interpretation on because I'm -- I'm projecting from the known to the unknown, away, going away from the producing well.

Q Does the degree of accuracy of the isopach of the Queen Sands in Section 21 allow you as a geologist to reach a conclusion that the risk factor penalty ought to be less than 200 percent for each of these wells?

A No, sir.

Q Is water production a factor in the Queen formation in this immediate area, Mr. Miller?

A No, not in this immediate area from the Penn formation, no.

Q Describe for us what your recommendation is about a drilling sequence between Well No. 2 and Well No. 3.

A Okay. At this time it is very difficult to determine which well should be drilled first. Our sequence of events will be to drill the Well No. 1 in the south half of that southeast quarter and re-evaluate my maps and the -- try to determine, or get a better fix on which way the net pay is going to go and then propose the Well No. 2, the second well, which may be what we've called here No. 2 or No. 3.

Q Let's assume the drilling sequence takes

place as you've just suggested and Bass undertakes the drilling of the No. 1 Well in the southeast of the southeast.

A Yes, sir.

Q Will the results of that well allow Bass to diminish the risk with regards to a decision for all interest owners for the drilling of the second or the third well?

A Based on the results that I have seen from the Hondo well to the southeast of us and the OXY well to the southwest of us, I believe the risk of drilling a dry hole is extremely high in this area on any one well step out, so I do not see that the risk is going to be diminished tremendously.

Q Do you have a recommendation to the Examiner as to how he might sequence the election periods of working interest owners between the time they would have to make an election decision on the last of the two wells to be drilled?

A Okay. It would be our proposal to drill the second well after a, you know, 90-day period of evaluating the first well and then we would prefer an additional 90-day period before we drill the third well to give us enough time to evaluate not only the logs, the maps, but the production of the second well.

Q But let's assume the second well is drilled and completed. What information do you propose to make available to the working interest owners prior to the time they need to make an election on the third well?

A Okay, we would, of course, the working interest owners would receive all the data that we have submitted to the State as required State data. We would give them the logs of the second well so that they could make their own evaluation, determining their own risk on drilling the third well.

Q What type of logs would provide?

A It is our intention to run porosity -- gamma ray porosity logs and resistivity logs and we'd make these available.

Q And you'd make those available plus the completion information that is disclosed on the State reports --

A Yes.

Q -- so that they will have that information available before the election period expires in which they must commit on the third well?

A That is correct.

Q What period of time do you propose to allow those parties to examine the data and to make a decision on participation in the third well?

A I would think 30 days would be reasonable.

Q Is that a period of time that you commonly could --

A Yes, sir.

Q -- take that information and you, as a geologist, examine and reach a conclusion about participation for your company?

A Yes, sir.

Q In addition to the geologic risk involved in drilling these type of Queen wells in this immediate area, Mr. Miller, are there other types of risks involved?

A Yes, there are other risks involved considerably. One thing would be the risk of drilling -- making a completion and drilling a commercial well, or a production stream risk.

The other risk which is unique to this area is a waterflow that occurs at approximately 2800 feet. Mr. Nutter is prepared to discuss these other risks and I am not prepared to do so.

Q In what geologic formation does this waterflow occur?

A This waterflow occurs apparently from the base of the salt.

Q At approximately what depth?

A At approximately 2800 feet.

Q And your Queen wells are drilled to a total depth of approximately what?

A 4600 feet.

Q What specific example in the immediate area causes you to know that waterflow is a problem?

A Okay, the Hondo well just abandoned, plugged and abandoned in the northwest quarter of the northwest quarter of Section 27, encountered a very severe waterflow that flowed as much as 2000 barrels of water a day from that interval and this lasted for a number of days.

MR. KELLAHIN: That concludes my examination of Mr. Miller, Mr. Stogner.

We would move the introduction of his Exhibits Number Eight through Eleven.

MR. STOGNER: Exhibits Eight through Eleven in both cases will be admitted into evidence at this time.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Miller.

A Yes, sir.

Q What kind of a timeframe in which the No. 1 is to be drilled? Do you have as starting date yet or what?

A We do not have a rig at this time although we are actively seeking bids for a rig. I would think within the next two months that we should be ready to drill that well.

Q And how long do you think it will be out there on that particular location before TD is reached?

A I think probably 10 to 15 days. I'm not real sure of that.

Q Now is the waterflow, if you encounter a waterflow, are you looking at an additional few more days to complete this?

A Probably we are and probably considerably more cost.

Q Okay. Would that tack on another 2 or 3 days to the 10 to 15 days or does that 10 to 15 days include that particular problem?

A I think it would add to it.

Q Okay, now you -- let me make sure I get this straight, the time period.

The first well gets down. Then you're requesting a 90-day period after the first well for --

A I was requesting a 90-day period from

the hearing or from the date of the ruling and then I was requesting an additional 90 days between Well No. 2 and No. 3 so that the 90 days did not run concurrently on Well No. 2 and 3.

Q Do you see any problem if we tack on, say, 180 days from the date of the hearing for the No. 3 Well with an option to seek an additional time period instead of basing the No. 3 compulsory pooling on the No. 2 Well?

A I would see no problem in that.

MR. KELLAHIN: It should work, Mr. Examiner.

Q And you mentioned a 30-day examination period. Do you want to run that by me again? I'm not sure I caught that.

A Oh, this is the time from the time that we send an AFE and a proposal to drill to our working interest partners or potential partners in this next well. We would give them 30 days in which time to study the data and make their own determination as to whether they would go working interest drilling or a nonconsent on the work.

Q Now is that for both wells?

A It would be the third well.

Q On the third well.

MR. STOGNER: Mr. Kellahin, what is the normal period that we give, 45, do you remember?

MR. KELLAHIN: A 30-day election period.

MR. STOGNER: Okay, so this is no different from those orders. I'm sorry, there are so many days mentioned in a compulsory pooling order I get confused on the proper time.

MR. KELLAHIN: The one we're focusing on is that 30-day election period and so that they'll have the data that we have for their election on the third well, we want to share the logs and the completion information.

Q Mr. Miller, let's refer now to Exhibit Number Nine. When I look down there in the extreme southwest quarter southwest quarter of Section 22 there's a dry hole marker. I believe that's the Leatherwood Atlantic State --

A Yes, sir.

Q -- No. 1 and did that penetrate the Queen?

A That well did penetrate the Queen. It was drilled prior to the discovery of the Queen in this area. It drilled to approximately 6000 feet. An electric

log and an old compensated gamma ray -- uncompensated neutron log was run. The Queen was not tested.

This well was drilled to the Penrose.

Q And was tested in the Penrose?

A Tested in the Penrose and plugged without setting casing.

Q Now you said this -- this well was drilled prior to the discovery of the pool.

A Yes, sir.

Q Approximately what date?

A The Leatherwood was completed in approximately, and I'm going to have to -- it was completed in approximately 1970, I believe.

Q Okay, and the Reeves --

A I do have the scout ticket data here.

Q -- Queen pool was discovered in what year?

A In 1977.

Q Well before the discovery.

A Yes, sir.

Q What was the discovery well for the Reeves Queen?

A The discovery well for the Reeves Queen was the Honeysuckle No. 1 State 22, which is in the southeast of the southeast of Section 22.

Q That is the one marked in red.

A Yes, sir.

Q And that is still producing?

A Yes, sir.

Q So there really hasn't been much activity in the Queen after that discovery well until today's date except for the two additional wells which is shown on the map?

A Yes, sir.

MR. STOGNER: I have nothing further of this witness. He may be excused.

Mr. Kellahin?

MR. KELLAHIN: One more witness, Mr. Examiner.

DANIEL S. NUTTER,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A My name is Dan Nutter. I'm a consulting petroleum engineer.

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

A Yes, I have.

Q And have you made a study of certain facts surrounding Bass' applications for two compulsory pooling orders in Cases 9664 and 9665?

A Yes, I have.

Q What specifically were you asked to do, Mr. Nutter?

A I was asked to make a study of the drilling costs in this area, the risk factors involved and the combined fixed rates for overhead costs.

Q And have you completed that study?

A Yes, I have.

Q And do you have opinions on both -- all three of those issues?

A I do.

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

MR. STOGNER: Mr. Nutter is so qualified.

Q Mr. Nutter, let me direct your attention to the No. 2 Well, which is Case 9664, and to your Exhibit Number Twelve. Would you take a moment and identify that exhibit for us?

A In Case Number 9664 and in '65 Exhibit Twelve is identical because these are the estimated well costs, the AFE for the wells, and they're both projected at this time to the same depth.

Now, these are not detailed AFE's. It's a summary of costs and if the examiner has any questions about specific items I can answer the cost. It is apparent from examination of Exhibit Twelve in Case Number 9664 that a dry hole would entail $111,000 of intangible well costs. The dry hole would encounter $9000 of tangible well costs and, of course, no lease equipment. So the total cost for a dry hole to the Queen formation for either of these pooled wells would be $120,000.

The completed producer, of course, would require additional pipe and testing and so forth and the intangibles for the completed producer well would be $169,000. There would be $65,000 worth of tangibles and $60,000 worth of lease equipment for a total estimated well cost of $297,000 for the completed producer.

Q Have you made a study to determine how these estimated well costs that Bass proposes to utilize for each of these wells compare to other AFE's or actual well costs for similar wells in the immediate vicinity?

A Yes, I have. They're very favorably compared.

Q And in what wells have you made that comparison, Mr. Nutter?

A I have the estimated -- I have the AFE that was used for the Hondo well which was just completed last month and the estimated costs for a completed well there is very similar to what we're talking about here.

Q Can you give us the numbers that Hondo utilized for their AFE on the offset well in the northwest of the northwest of 27?

A I don't have that number exactly with me at this time but it was within just a few thousand dollars of being the same.

Q In assessing the costs for drilling wells of this type in the area, Mr. Nutter, have, in making that study you determined whether or not there exists any additional risk that the operator needs to consider?

A Yes, there are several risks. As Mr. Miller mentioned in his testimony, there is always the risk of not encountering the porosity in the Queen formation.

Q Are there any other risks involved in drilling these wells?

A If you do encounter the Queen production there is the inherent risk of not getting a good enough well to pay out.

Q In addition to those risks are there any

mechanical risks involved in drilling the well?

A There's a severe risk that we're aware of now at this time.

Q Do either of the AFE's have a dollar factor built in as a contingency to anticipate that water-flow issue?

A No, sir, they do not.

Q Describe for us what information you have available on the waterflow issue.

A Okay. The Hondo Well was spudded on the 24th of March of this year and by the 26th of March they had already run their surface pipe. They ran 458 feet of 8-5/8ths inch pipe for surface pipe.

On Day 4, the 27th of March, disaster struck. I'm reading from the daily drilling report that Hondo gave us.

On Day 4 the depth was 2801 feet. They encountered a salt waterflow. They shut down for the waterflow. It goes on to say they encountered the water-flow at 2801 feet flowing out of the choke manifold with pipe rams closed. Choke manifold pressure was 450 psi. The standpipe pressure at 1000 feet was 825 psi. The pits filled up. It cut through the pit wall, flooded the loca-tion. They got 13 trucks out there hauling water and then a Cat to build an overflow pit down the hill to catch this

water that was flowing out of the pit and onto the location.

At that time just through Day 4 their cumulative drilling cost was $43,995. We'll say $44,000 and you'll see what I mean when I say disaster struck here in a minute.

On Day 5 there was zero drilling progress. They're waiting on orders for a good period of time. The drill pipe pressure was 850 pounds. There was 2000 barrels of water per hour flowing. The flow decreased to a 2-inch stream. 4-1/2 inch -- 4-1/2 hours was spent working on their stuck drill pipe. They still had a 2-1/2 hour flow 4-1/2 hours later.

They called McCullough out, ran temperature and noise log, showed that the waterflow was into the Redbeds at 500 feet. They attempted to break circulation with Halcote, pressured up with 3000 psi, couldn't circulate cement, but the flow did cut down to a one inch stream. The daily cost that day was $22,000 and cumulative costs are up to 66,000 plus now.

On Day 6 there was also zero progress as far as drilling is concerned. The salt water continued to flow. They prepared to trip out of the hole. They rigged up Halliburton. The pressured up to 2500 psi, pumped through the bit, and established a rate of 3 or 4 barrels

per minute at 1600 psi with 500 gallons of flow check, 100 sacks of Class C cement with 3 percent calcium chloride.

The rig was shut down then. They picked up the Kelly in the drill pipe.

Okay, at 3:00 o'clock in the afternoon the rate was 40 barrels per minute of flow. At midnight it was down to 20 barrels a minute and at 6:00 o'clock in the morning it was down to 12 barrels a minute of flow.

While they were pumping the cement a bridge in the annulus broke up and it flowed plus or minus 10 yards of salt and Redbed to the pit. It flowed out cement and flow check, estimated bottoms and up in less than 5 minutes. That shows how fast it was coming up the hole.

The daily cost that day was 32,000 and our total cumulative well costs through Day 6 are up to $99,000.

Day 7 was another bad day. They had -- they monitored the waterflow. The waterflow was -- they mixed more mud and so forth. The waterflow was 900 barrels of water per hour that day. They hauled 12,120 barrels of water away. The estimated flow was 900 barrels of water an hour.

The daily cost that day was $16,900 and the cumulative costs were up to $116,000.

Day 8 they hauled 23,850 barrels of salt water. The cost was $23,000. It was still flowing at the rate of 994 barrels an hour with 15 trucks hauling water.

They pumped 30 barrels of fresh water and 30 barrels of 50 BIZ (sic) sweep into the well to try to clean it up a little bit. The mud cost was $4000. The daily cost that day was $39,500 with a cumulative cost of $155,266.

Day 9, same thing over again. It was flowing 900 barrels an hour. They were hauling water. Cost that day was 22,593 for the mud that they tried to cure the well with.

The daily cost was 54,480 including casing because they did run casing that day but by this time the Commission was requiring them to try to do something to stop this downhole blowout into the Redbeds and into the salt.

So their cumulative costs up to this point, now, are $209,700.

Day 10, they started drilling again and they hauled 19,200 barrels of water at a cost of $17,000. The flow was decreasing to about 5-to-600 barrels per hour but they had 7 trucks still hauling.

The daily cost that was 19,000. Cumulative costs were $229,000.

Day 11, they pumped in some more fresh water with some sweep. Their pipe keeps getting stuck in the hole because this hole is washing in on the -- caving in on the drill pipe, so they're using this sweep trying to keep the formation back.

But that day they had 4 -- 3 reported tight spots in their hole at 1950, 1620 and 1512. They hauled 13,500 barrels of water on Day 11 at a cost of over $13,000. The rate, however, was decreasing. They only needed three trucks to haul the water which was now flowing at the rate of 150 barrels an hour, but the daily cost that day was almost 17,000 and cumulative costs are up to $245,000 now.

Day 12, the flow was down to 50 barrels an hour. They hauled 7,050 barrels of water away at a cost of over $8000. They had tight spots in the hole at 1215, 1316, 1420, 1512, 1650 and 1950, so they were pumping fresh water in to try to dissolve these bridges.

On Day 13 they laid down their drill pipe. They did some logging. They went back in with their drill pipe; spotted 40 sacks of cement at 5050 to 4950. They laid down of spot -- of drill pipe; spotted 50 sacks at 4470 to 4370.

They then laid down 43 sacks and spotted 60 sacks at 3124 to 3024.

They hauled 3030 barrels of water. The mud cost that day was $4000. The daily cost of operation was almost 7000 and the cumulative cost is up to $267,000 now.

On Day 14 they laid down their drill pipe, came out and changed their rams. They ran their casing and packer. This was a Commission-required casing program. Even though the well was not going to be a producer they had to run some pipe in there to try to seal off some of this area causing the trouble.

And finally they -- they released the rig after running 43 joints of 5-1/2 inch pipe to 1779. The float shoe was at 1885. They ran a centralizer on every other joint. They cemented with 350 sacks of Class C with some calcium chloride and some -- and 100 sacks of Thickset. They cement bridged and it didn't circulate, so they moved the rig off the location. They rigged up McCullough, then. That was on the 6th of April. On the 11th of April they bled off a small stream of water from the annulus and rigged up McCullough, ran surface noise and temperature log; perforated four holes at 592 feet, squeezed it with 250 sacks of neat cement. They got 6 sacks to the surface and squeezed the 100 barrels at 400 psi.

Q What's the total reported cost to that

operator for that project?

A We estimate that it cost the operator, we don't have the actual costs, because they don't give a daily cost every day, but we estimate that this thing cost them somewhere between $175,000 and $200,000 additional over what a dry hole would have cost to the depth that they drilled.

Q Having studied the problem Hondo had in drilling the offsetting well have you made a recommendation to Bass with regards as to what additional incremental costs they might expect to control waterflows in that particular formation?

A Yes, I have Exhibits Twelve and Thirteen -- or Thirteen in Cases 9664 and 9665.

Now the Commission has -- we have a drilling permit already approved for that No. 1 Well that Mr. Miller had referred to. That drilling permit called for 500 feet of surface pipe. We were going to run 8-5/8ths to 500 feet, which is close to what Hondo had run. They had run 485 feet of their 8 and 5, but we were going to run 500 and now the Commission has requested that this surface casing program be changed to 1680 feet of 8-5/8ths but Bass does not think that this provides enough protection, so what we're proposing to do is to drill a bigger hole and run 11-3/4 inch surface pipe and then we would

drill out from under that. That would be run and cemented. Then we would drill out from under that and if a waterflow was encountered, then, we would run an intermediate string of pipe before we would continue on down to test the pay.

So Exhibit Thirteen in these two cases shows the incremental cost associated with the high -- high pressure waterflow. The incremental costs required just to get to the option of running the contingent intermediate string, which would be run in the event of a waterflow would be $40,000. The incremental cost of the extra surface pipe is $29,435. The incremental surface and intermediate hole cost because we would have to be drilling a much larger diameter hole, would be $3,800. The incremental surface casing and equipment costs are $4,000, and the surface casing transportation would be 2765. So we have a total incremental cost just to get to the option of finding out whether we're going to encounter a waterflow or not, for an additional $40,000.

Now if we did encounter the waterflow and continued to drill on down, we would run the intermediate string if we encountered the waterflow.

The incremental cost of an 8000 -- of a 3000 foot intermediate pipe string of 8-5/8ths inch casing would be 32,550. The cementing and equipment cost for the intermediate string would be $12,000. There would be two

additional days for running, cementing and nippling up the intermediate string at $7,600. There would be intermediate pipe transportation charges of $4,000; incremental mud costs of $3,000 and two days of additional supervising -- supervision for running, cementing and nippling up the intermediate casing at 750. So we'd have an additional incremental cost of $60,000. So if we go back to the -- if we go back to Exhibit Number Twelve we saw that the dry hole was going to cost $120,000. The additional incremental costs on that would be $40,000 for the -- to determine if we needed the intermediate string; an additional $60,000 if we did need the intermediate string. So the cost would go up by $100,000.

The producing well at $297,000 would also be increased by $100,000.

Q Based upon your study of the costs involved, do you have an opinion with regards to whether or not the proposed AFE and the incremental costs associated with a high pressure waterflow are fair and reasonable?

A I think they are to be safe, to really be conscientious about trying to avoid this waterflow in the first place and if you do encounter it, to be able to handle it in a safe and sane manner is going to cost some extra money and it also increases the risk of the loss of the hole because if you've got that water down there at

that pressure, you've got another risk factor involved and that is collapse of your casing after you do get it run.

Q What, in your opinion as a petroleum engineer is an appropriate risk factor penalty that you would recommend Mr. Stogner incorporate into each of the forced pooling orders?

A Well, considering the factors that Mr. Miller went into of the high risk of encountering the porosity in the Queen here as evidenced by offsetting wells being dry, the wells that are direct offsets to the producing well being dry holes, plus the risk that I mentioned earlier of even if you get a producer not having sufficient reserves to pay out, plus this mechanical problem that you're likely to encounter because of the waterflow, I can't see anything less than the 200 percent at all.

Q Will that 200 percent change with the drilling of the third well?

A If this waterflow is present that's going to be there. We don't even know where the water's coming from. There is a waterflood or a salt water disposal, there's injection of water about a mile to the north. I don't know if that's the source or not, but this water wasn't there before. They used to not encounter this waterflow in these wells, but it's there today.

Q Regardless of the sequence of drilling

of the 1, 2 and 3 wells, the risk factor in your opinion remains the same?

A I think it's the same. It's a risky proposition even when you're talking about direct offsets.

Q Have you examined and reached a conclusion about the overhead rates that you would recommend to Mr. Stogner that he incorporate into the order?

A Yeah, Ernst and Whinney for their 1988 survey results show that in southeast New Mexico a well of this depth, an oil well of this depth, would have a monthly combined fixed rate of $3,069 and a monthly producing rate of $318, but I think that's talking about a well that you can just go out and drill without anticipating a whole lot of expected overhead. Certainly I'm sure that there's going to be a lot more office supervision, a lot more telephone calls and hours spent on these wells than would be normal because of this critical situation with this water, and I would recommend the 5000 and 500 be adopted as the combined fixed rates for drilling and producing wells here.

Q For each of the two wells involved here?

A Yes, sir. I realize that's in excess of Ernst and Whinney but I think the conditions here justify that.

Q Were Exhibits Twelve and Thirteen in

each of these two cases prepared by you?

A Yes, they were.

MR. KELLAHIN: We move the introduction of Mr. Nutter's exhibits.

MR. STOGNER: Exhibits Twelve and Thirteen will be admitted into evidence.

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

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Nutter, now Exhibit Twelve does not reflect additional charges as Exhibit Number Thirteen, is that correct?

A No. Exhibit Twelve was actually prepared before the waterflow was encountered so this was a clean situation without anticipating any waterflow problems. It could have been redone with the incremental costs worked into it but I thought it better to show what we had expected and what we now anticipate, especially, already the Commission has change our surface casing program from 500 feet to 1680, so we know that's going to happen and we think we'll probably need an intermediate if we encounter the waterflow.

Q Now this additional surface casing is to

1680, is that right?

A That is correct. That is Commission requirement now.

Q And where did you get the $20.75 per foot at for the 11-3/4?

A That's not the -- oh, that's -- okay, that's the incremental cost above and beyond what the original surface casing was going to cost.

Q Oh, okay, so this is --

A These are all incremental costs above what the original was. You see your surface casing was $5,425 on the original cost estimate, and 1680 feet of 11-3/4 comes out to the sum of 5,425 plus 29,435. It better, anyway.

Q Okay.

A So this, the original cost estimate stands, but this goes on top of it.

Q Okay. Mr. Nutter, in your study of this particular area was there any other waterflows encountered other than this Hondo well?

A I'm not aware of any waterflows being encountered by any well until this occurred. The last well I think that was drilled in the area was that Tamarack No. 2 and I believe that was drilled in 1986, I think.

Q Did you research the records on that

well?

A Yes, I have looked at the well records on that well.

Q Was there any mention of any trouble in the (unclear) wells?

A I didn't see anything. As a matter of fact --

Q And that -- I'm sorry.

A I've got the well file on the Hondo Well and it doesn't mention a waterflow. It just mentions that the pipes in the well. They don't say why.

Q In Bass' conversations with the OCD in the Hobbs office has there been any mention or any reason to think if the waterflow was not encountered in the Well No. 1 that it will not be encountered in Wells No. 2 and 3? Or vice versa, are we looking at maybe encountering it even more in those wells.

A If it's coming from the north you're liable to see it again. And also remember that that drilling report, they plugged that well on the last day when they ran that last -- perforated the pipe at 592 and squeezed in the last cement was 4-11, which is a month ago tomorrow. So you've had a chance for -- if they drained off -- I don't even have a total on -- nobody really knows how much water flowed because it broke through the pit and

it was stored in the pits for a number of days and it flooded the location. A lot of it, I'm sure, went into the sand, but if that kind of flow was encountered and then it was allowed to recharge for a month, by tomorrow, there's a good chance that you'd encounter that 2000 barrels a day again.

Q Now you've requested $5000 and $500 for the overhead charges. Now, let's see, according to Mr. Wilpitz' testimony, there's 37 percent of the parties have agreed. Now are their overhead charges $5000 also on those parties that have agreed?

A I couldn't tell you on that.

MR. STOGNER: Mr. Wilpitz, I open the question to you.

MR. WILPITZ: Those are all farmout parties so there'll be no overhead.

MR. STOGNER: Okay.

Q Mr. Nutter, in your tenure with the OCD what was the highest overhead charges you put on an order?

A I've seen wells at 6000.

Q Thank you, Mr. Nutter.

MR. KELLAHIN: That's ancient history, though, isn't it, Mr. Stogner?

MR. STOGNER: It's history, Mr. Kellahin.

A We're not asking for the 17,000 a day they get down on the gulf, by the way.

Q Thank you, Mr. Nutter.

MR. STOGNER: Are there any questions of this witness?

He may be excused.

Mr. Kellahin, do you have anything further in this case or both of these -- either of these cases?

MR. KELLAHIN: Mr. Examiner, we have our certificates of mailing in compliance with the notice orders in which we have return receipt cards from each of the parties to be pooled and I would submit those in each case as Exhibit Fourteen.

MR. STOGNER: Exhibit Fourteen will be admitted into evidence at this time.

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

MR. STOGNER: Does anybody else have anything further in Case -- in both -- either cases Nos. 9664 or 9665?

These cases will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case Nos: 9664 and 9665 heard by me on 10 May 1989

Michael E. Stogner, Examiner
Oil Conservation Division

BASS ENTERPRISES PRODUCTION CO.
FIRST CITY BANK TOWER
201 MAIN ST.
FORT WORTH, TEXAS 76102
817/390-8400

August 31, 1989

Certified Return Receipt No. P130098292

Producers Engineering Company
1300 Main Street
Suite 1150
Houston, Texas 77002

Re: BEPCo-Reeves "21" State Well No. 2
NW/4 SE/4 Section 21, T18S-R35E, N.M.P.M.
Lea County, New Mexico

Gentlemen:

Under our letter of May 31, 1989, Bass transmitted for your review and election a copy of New Mexico Oil Conservation Division Order No. R-8937 which was issued in connection Case No. 9664 heard before the New Mexico Conservation Division. The subject order pooled all working mineral interests under the captioned lands as to those depths from the surface of the earth to the base of the Reeves-Queen pool or to a depth of 4600', whichever is deeper.

The terms of the order provided for a 200% penalty as a reasonable charge for the risk involved in the drilling of the well. Additionally, the order stipulates that $5000.00 per month while drilling and $5000.00 per month while producing will be the reasonable charges for supervision (combined fixed rates).

Under letter of July 24, 1989, Bass provided you with a copy of a letter dated July 17, 1989 signed by Mr. William J. LeMay, Director of the New Mexico Oil Conservation Division. In that letter the New Mexico Oil Conservation Division granted an extension of time in which to begin the subject well until October 15, 1989.

The order stipulates that, in the event the operator does not commence actual drilling operations on a proposed well within ninety (90) days from the poolee's receipt of the AFE, a new AFE must be transmitted. In keeping with that provision of the order, enclosed please find updated AFE cost estimates which reflects an estimated costs of $355,900.00 as estimated total well costs.

If you desire to participate in the drilling of this well you must remit to Bass no later than thirty (30) days from your receipt of this notice, in the form of cashier's check or a money order, your prorata share of the well costs. Attached as Exhibit "A" please find a schedule indicating your working interest in the subject well.

Should you have any questions regarding this, please feel free to contact me at (817) 390-8585.

Sincerely,

Louis W. Wilpitz
Landman

LWW:tlo

cc: State of New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504
Attention: Mr. William J. LeMay, Director

BASS ENTERPRISES PRODUCTION CO.
FIRST CITY BANK TOWER
201 MAIN ST.
FORT WORTH, TEXAS 76102
817/390-8400

August 31, 1989

Certified Return Receipt No. P130098289

Georgetown Exploration, Inc.
707 Travis
Suite 1700
Houston, Texas 77002

Re: BEPCo-Reeves "21" State Well No. 2
NW/4 SE/4 Section 21, T18S-R35E, N.M.P.M.
Lea County, New Mexico

Gentlemen:

Under our letter of May 31, 1989, Bass transmitted for your review and election a copy of New Mexico Oil Conservation Division Order No. R-8937 which was issued in connection Case No. 9664 heard before the New Mexico Conservation Division. The subject order pooled all working mineral interests under the captioned lands as to those depths from the surface of the earth to the base of t e Reeves-Queen pool or to a depth of 4600', whichever is deeper.

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Should you have any questions regarding this, please feel free to contact me at (817) 390-8585.

Sincerely,

Louis W. Wilpitz
Landman

LWW:tlo

cc: State of New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504
Attention: Mr. William J. LeMay, Director

EXHIBIT "A"

Parties Owning A Working Interest Under New Mexico Oil Conservation Division Order No. R-8937
NW/4 SE/4 Section 21, T18S-R35E, N.M.P.M.
Lea County, New Mexico

Parties	Interest
King Ranch Oil & Gas, Inc.	.15000000
The Grayrock Corporation	.07500000
W.C. Blanks et ux, Violette Blanks	.06000000
American Cometra, Inc.	.07200000
Polaris Production Corp.	.01575000
H. Grady Payne, III	.00225000
Power-Can Resources, Inc.	.03750000
Producers Engineering Company	.05625000
Georgetown Exploration, Inc.	.05625000

BASS ENTERPRISES PRODUCTION COMPANY

AFE COST ESTIMATE

WELL: REEVES "21" STATE #2 DEPTH: 4600'
LOCATION: SEC 21 T18S, R35E, LEA COUNTY, NM

COST CATEGORY	ESTIMATED
I. INTANGIBLE DRILLING COST	
A. SURFACE COST	15,000
B. RIG COST	41,000
C. SURFACE CASING SERVICES	11,750
D. PROTECTIVE CASING SERVICES	19800
E. BIT COST	8,000
F. DRILLING FLUID COST	12,500
G. TRANSPORTATION COST	0
H. SUPERVISION	3,750
I. RENTALS	2,000
J. MISCELLANEOUS COST	1,400
TOTAL INTANGIBLE DRILLING COSTS	$115,000
II. TANGIBLE DRILLING COST	
A. CONDUCTOR CASING	1,000
B. SURFACE CASING	32,000
C. PROTECTIVE CASING	36,000
D. SURFACE CASING HEAD	1,700
E. PROTECTIVE CASING HEAD	1,900
F. MISCELLANEOUS	400
TOTAL TANGIBLE DRILLING COST	$73,000
III. EVALUATION	
A. LOGGING COST	7,500
B. DRILL STEM TEST COST	0
C. CORE SERVICES	0
D. MUD LOGGING COST	1,050
E. SUPERVISION(BASS)	1,800
F. RIG COST	3,500
G. MISCELLANEOUS COST	2,650
TOTAL EVALUATION COST	$16,500
IV. INTANGIBLE COMPLETION COST	
A. RIG COST	4,000
B. PROD. CASING SERVICES	14,550
C. SUPERVISION	1,800
D. LABOR	0
E. TRANSPORTATION	0
F. PROD. TBG. SERVICES	0
G. COMPLETION FLUID	2,000
H. RENTALS	3,750
I. PRODUCTION LOGGING	1,500
J. PERFORATING	2,000
K. WIRELINE WORK	0
L. TREATING	20,000
M. TESTING	0
N. COMPLETION RIG ANCHORS	750
O. BITS	250
P. MISCELLANEOUS	3,400
TOTAL INTANGIBLE COMPLETION COSTS	$54,000

BASS ENTERPRISES PRODUCTION COMPANY

AFE COST ESTIMATE

WELL: REEVES "21" STATE #2 DEPTH: 4600'
LOCATION: SEC. 21 T18S, R35E, LEA COUNTY, NM

COST CATEGORY	ESTIMATED
V. TANGIBLE COMPLETION COST	
A. PROD. CASING/LINER	32,200
B. TUBING HEAD	1,000
C. PRODUCTION TUBING	11,730
D. CHRISTMAS TREE	0
E. DOWNHOLE EQUIP.	9,275
F. MISCELLANEOUS	1,795
TOTAL TANGIBLE COMPLETION COST	$56,000
VI. LEASE EQUIPMENT/INSTALLATION	
A. EQUIPMENT	34,800
B. LABOR	5,500
C. MISCELLANEOUS	1,100
TOTAL LEASE EQUIPMENT	$41,400

COST SUMMARY

		DRY HOLE	COMPLETED
INTANGIBLE			
I	Drilling	115,000	115,000
III	Formation Evaluation	16,500	16,500
IV	Completion		54,000
Subtotal		$131,500	$185,500
TANGIBLE			
II	Drilling	73,000	73,000
V	Completion		56,000
Subtotal		$73,000	$129,000
VI	Lease Equipment		$41,400
TOTAL		$204,500	$355,900